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EXCAVATIONS AT SALTER'S LANE, LONGHAM, 1990
Neolithic and Bronze Age Features and Artefacts

by Trevor Ashwin
with contributions by Helen M. Bamford, Val Fryer, Peter Murphy *and* John Wymer

SUMMARY

Excavations carried out during 1990 in advance of gravel extraction in the area immediately to the east of the Launditch produced evidence for intermittent occupation during the period c.4000-1500 BC. This took the form of pits and other features containing Neolithic plain bowl, Beaker and urn pottery of Early Bronze Age type. These discoveries may be added to many other prehistoric finds from the immediate area made during the 1970s and 80s (Wymer and Healy 1996).

Only a small number of prehistoric features were found, and these occurred in isolated groups scattered over a large area. The excavation results were of especial interest for two reasons, however. Firstly they contribute to a growing body of Neolithic and Bronze Age evidence from one small area of the central Norfolk watershed, a region of the county often thought to have been unconducive to pre-Iron Age settlement. Secondly, a significant and uncharacteristically large stratified collection of Beaker pottery - a ceramic type more commonly found in quantity in ploughsoil contexts or in middens and artefact-scatters - came from one of the excavated pit groups.

In the context of the surrounding Boulder Clays, the subsoils in the area of the site are uncharacteristically sandy and free-draining. This makes it difficult to be certain that the pre-historic sequence here is characteristic of the heavy clays which predominate elsewhere in the centre of Norfolk, and which have seen very little area excavation.

A small number of Iron Age features (including pits, a four-post structure and a small square enclosure) were also excavated; these will be published separately in a forthcoming report bringing together all Iron Age evidence from the Launditch and its environs (Ashwin and Flitcroft forthcoming).

Introduction

(Figs 1 and 2)

The parish of Longham lies in the uplands of west-central Norfolk, 5km north-west of Dereham and 10km south of Fakenham. Lying mostly at an elevation in excess of 30m OD, this area of the county lies within the central Norfolk watershed, an upland zone which separates the drainage systems of the east-flowing Rivers Yare and Wensum from those of the Nar and Wissey which discharge westwards into the Wash.

Although the central till plateau of 'High Norfolk' is dominated by heavy Boulder Clays, localised surface deposits of sand and gravel outwash do occur within it. Longham lies within one such inclusion in the area to the north and north-west of Dereham, and the parishes of Longham and Beeston with Bittering have seen extensive gravel extraction in recent years. This has led to many prehistoric discoveries; the 1990 excavations formed but the latest episode in a long series of watching briefs and small excavations carried out in this vicinity during the course of wholesale gravel extraction by Ennemix, Tarmac and other commercial concerns (Wymer and Healy 1996). Excavations at Salter's Lane, Longham (Site 13025) were carried out during

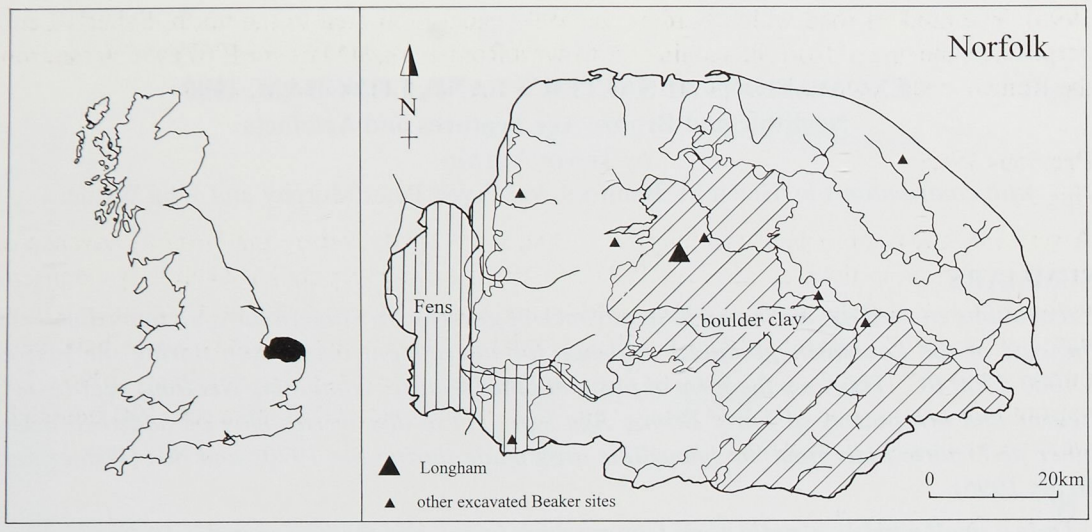

Fig. 1
Site location in UK/Norfolk, showing extent of Boulder Clay plateau and Beaker settlement sites

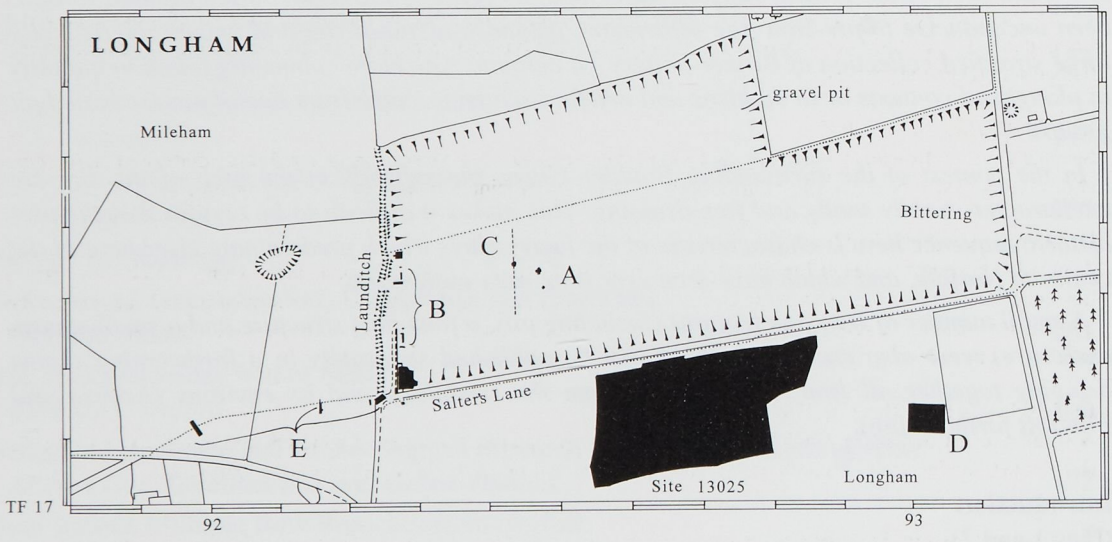

Fig. 2
Location of excavated area, showing Bittering/Launditch/Longham sites

1990 in advance of gravel extraction, by a Norfolk Archaeological Unit (NAU) team directed by Heather Wallis. The work was funded by the developers, Ennemix Ltd.

The excavation site lies atop a low, eastward-protruding gravel spur, at an elevation of *c.* 60m OD. As well as the palimpsest of prehistoric settlement activity revealed by excavation, two major archaeological features of a linear nature cross the area. Three hundred metres to the west of the 1990 excavation site is situated the Launditch, a north-to-south aligned bank and ditch. Although mostly deliberately levelled for agriculture, it can nonetheless be traced over a length of *c.* 6km. While regarded for many years as an Anglo-Saxon phenomenon (Wade-Martins 1974), it has been suggested more recently that the Launditch was perhaps one of a series of several major linear earthworks of Iron Age date recorded in central and west Norfolk (Davies

1996). The modern road which borders the 1990 excavation area to the north, Salter's Lane, perpetuates the line of Norfolk's main east-to-west Roman road (Margary 1967) which ran from the Roman small town at Brampton all the way to the Norfolk fen edge at Denver.

Previous Work

(Fig.2)

A series of excavations and watching briefs had been conducted by the NAU in advance of gravel extraction in the area between 1978 and 1985. This quarrying has been very extensive, with the zone to the east of the 1990 excavation and the entire area to the north of Salter's Lane now being almost entirely worked out. The results of all of these previous works have been published in the *East Anglian Archaeology* monograph series (Wymer and Healy 1996). The various episodes of work located on Fig.2 are summarised here. All of them save **E** (Launditch) were necessitated by quarrying.

A: BITTERING, SITE 13023
Examined during 1978-80 by Andrew Lawson and Andrew Rogerson. Three of the small number of features in this area appeared to be pre-Iron Age, producing worked flint, rusticated Beaker and grogged Bronze Age sherds.

B: BITTERING, SITE 15910
Excavated by Rogerson in 1980. As well as a line of apparently Iron Age post-holes running parallel to the adjacent Launditch, a few features contained Beaker and Bronze Age type ceramics, along with struck flints which included a barbed-and-tanged arrowhead.

C: BITTERING, SITE 15995
Salvage work by Rogerson and Healy in 1980 revealed a group of features containing Beaker pottery of 'Late' type and, slightly further to the north, an apparently solitary pit containing Beaker of 'Middle' pattern.

D: LONGHAM, SITE 7329
A putative barrow excavated by John Wymer in 1984 proved to be a periglacial mound into which, however, a number of small pits containing complete Beakers had been inserted. Monitoring of an area of topsoil removal to the north-east of the mound revealed small numbers of features, containing Neolithic bowl, Beaker, Early Bronze Age and Iron Age pottery.

E: THE LAUNDITCH, SITE 2796
A small excavation for the NAU by Kenneth Penn at the intersection of the Launditch and Salter's Lane in 1992 showed that the infilled Launditch was sealed by road metalling (Ashwin and Flitcroft forthcoming).

The present report is concerned only with pre-Iron Age material from the Ennemix quarry, and should be regarded as a sequel to the results from **A - D**, which are fully published in Wymer and Healy 1996. The Iron Age features and finds from the excavation are to be published separately, in an integrated summary report which combines the later prehistoric information from the Launditch area with that from all of the other excavations and watching briefs in the area to its east (Ashwin and Flitcroft forthcoming).

The 1990 Excavations

(Fig.3)

Quarrying work at Site 13025 by Ennemix Ltd began in January 1990, with the removal of topsoil and subsoil from an area of nearly four hectares using a towed box-scraper. Quarrying operations were monitored by a continuous watching brief until the start of the full-scale excavation in August. This was carried out by a team of eight NAU archaeologists, and continued until the end of November.

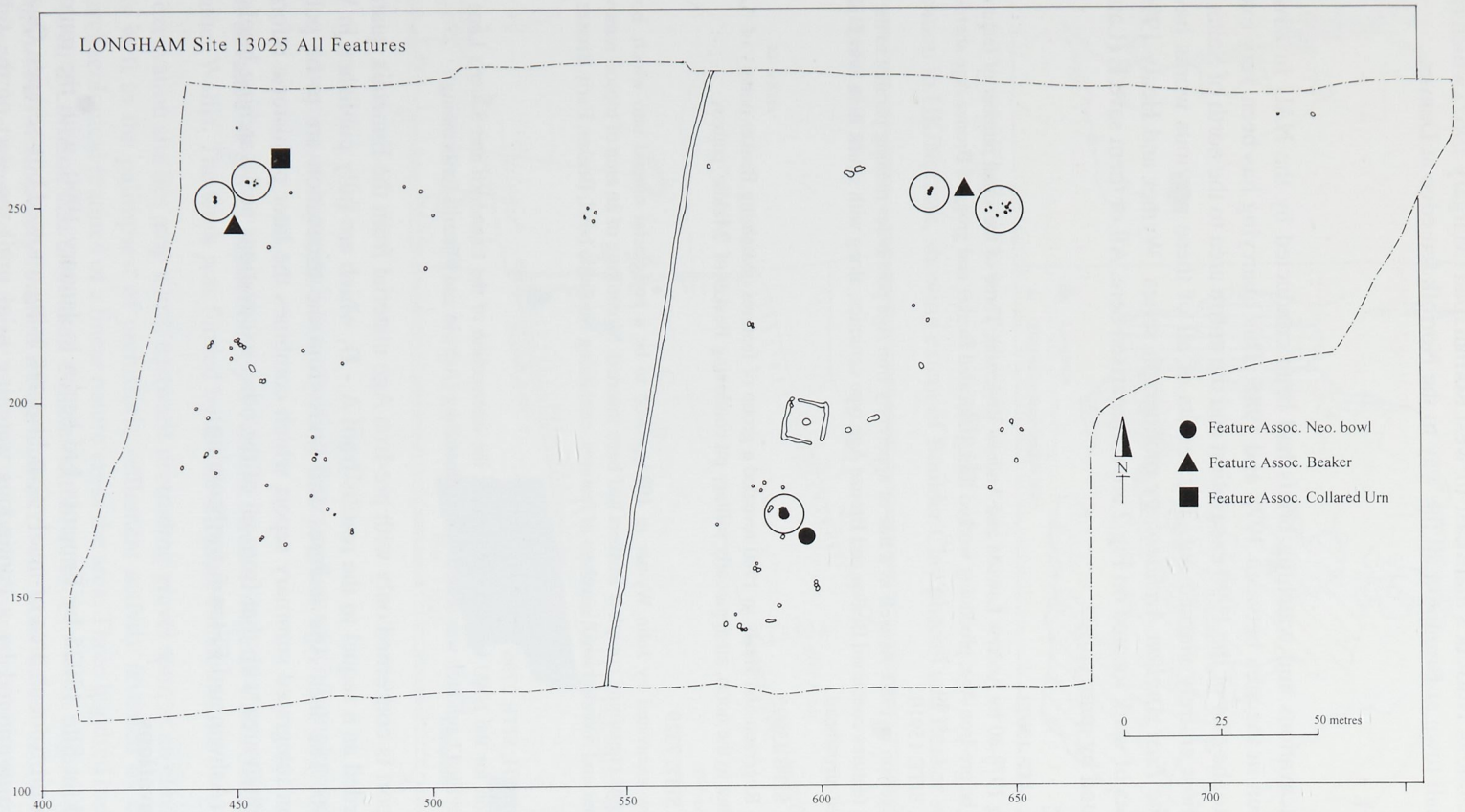

Fig.3
Plan showing pre-Iron Age features (in black, circled). Features of other periods are shown in outline only.

Undisturbed natural deposits were coarse sandy gravels, containing varying quantities of large flint nodules. It was clear that all negative features had been truncated to some degree by ploughing prior to the archaeological stripping of the area. It should not be forgotten that some shallower cut features may have been completely eroded away, while the acid nature of the subsoil ensured that no animal bone from prehistoric deposits survived for collection.

The tidiness of the original bulk topsoil-stripping varied considerably, and the lapse of time before full excavations began was often long enough to permit the growth of vegetation. Therefore each area of the site was cleaned mechanically, using a hydraulic excavator under close supervision, before excavation and recording commenced. This proved a successful means of identifying features without wholesale shovel-cleaning of the entire area. Figure 3 illustrates the distribution of recorded features. Their density was generally very low, and many could not be dated by artefactual or other means. Approximately 30 pits and post-holes, typically lying in small groups, yielded prehistoric pottery and lithic items. Nineteen of these appear to have been of pre-Iron Age date, and these are the subject of this report. Also found were a number of Iron Age features, including a small square-ditched enclosure and a four-post structure (Flitcroft and Ashwin forthcoming). Full details of all undated and natural features may be found in the site archive, which has been deposited with the Norfolk Museums Service.

Pre-Iron Age Features

(Figs 4-8)

A single pit contained Neolithic plain bowl pottery. Thirteen additional features were associated with Beaker pottery, while five more contained Collared Urn and Bronze Age ceramics.

c. 5000-3200 BC - Earlier Neolithic

(Fig.4)

Pit *305* was located in the southern part of the site. The single largest negative feature recorded during the 1990 excavations, it was nearly 3m long and 0.7m deep. In its immediate area lay five other, much smaller, pits. Three of these contained Iron Age pottery, and the features have dated to the later prehistoric period. The pit was steep-sided, and was filled by a series of thin deposits. Most of these were sands and silty sands, some of them very pale in hue.

It is not entirely clear how the pit had become infilled. Although the sterile nature of the deposits themselves was suggestive of natural processes of silting and wind blow, the pronounced - and sometimes steep - interfaces between the deposits themselves makes this less certain. Indeed it is possible that some of the near-vertical edges indicate episodes of re-excavation or recutting. Several flint flakes were found in its lower fills, along with nine sherds of pottery representing at least four undecorated Neolithic bowls. A subcircular pit of uncertain date, *366*, had been excavated into the north-western part of the feature after it had been completely infilled.

Although the pit might have been used as a quarry or storage pit, the reason for its excavation is unclear. Pits of this size are a feature of earlier Neolithic settlement sites excavated elsewhere in Norfolk, having been recorded at Broome Heath, Ditchingham (Wainwright 1972, figs 9 and 10) and Spong Hill, N. Elmham (Healy 1988, figs 6-16), but are less often recorded in such apparent isolation from similar features.

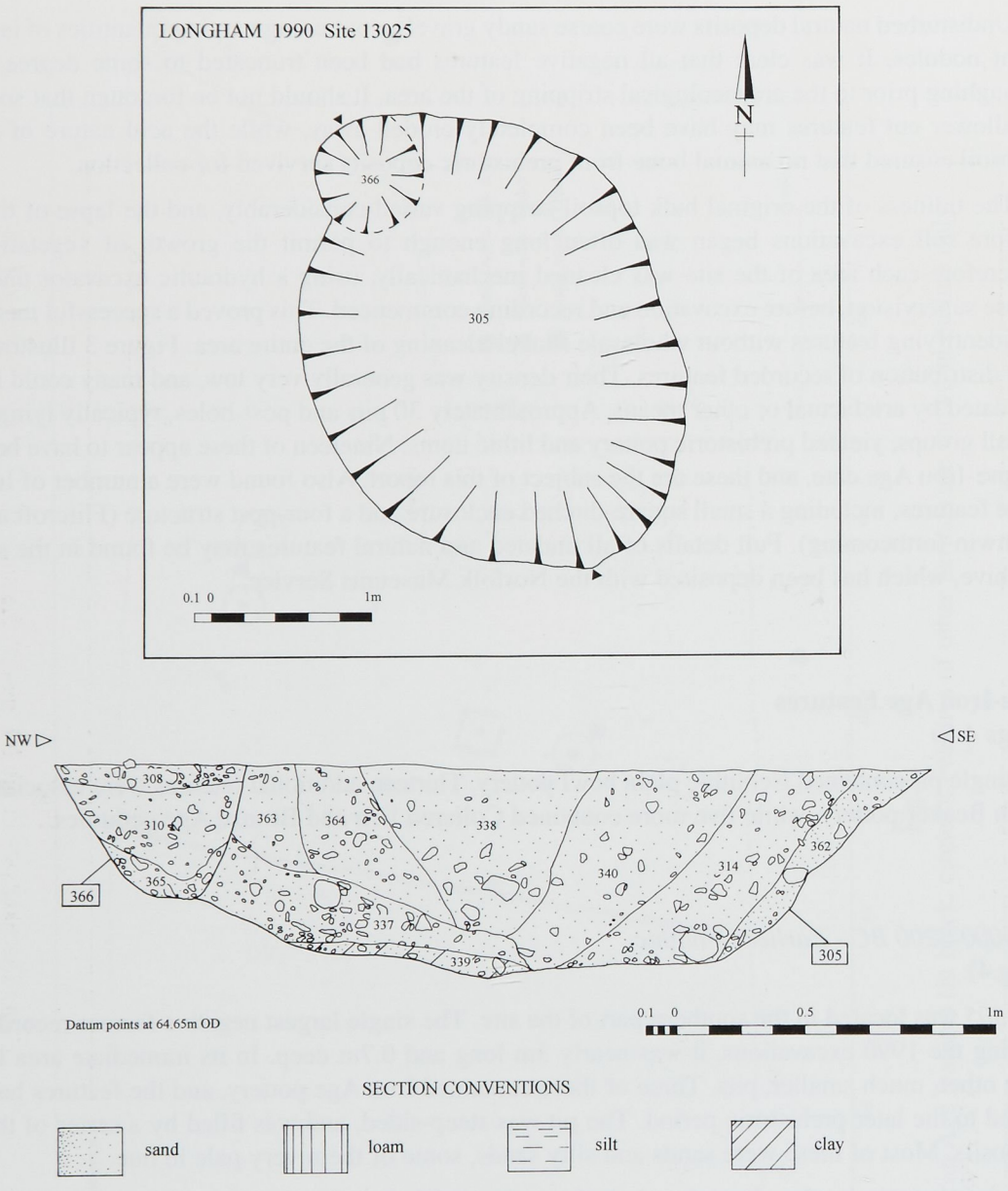

Fig.4
Pit *305*, plan and section

c. 3200-1700 BC - Later Neolithic/Early Bronze Age

(Plates 1 and 2; Figs 5-7)

Features in the north-eastern part of the site

Two concentrations of small, shallow pits were excavated in full.

The more easterly of these groups are illustrated in detail (Plate 1; Figs 5 and 6). It consisted of nine pits, some of them very close together and two of them (*43* and *169*) intersecting. Most were subcircular or ovate, varying in diameter or greatest breadth between 0.7m and 1.3m. Heavy truncation was evident, the deepest example surviving to a depth of only 0.4m, but the

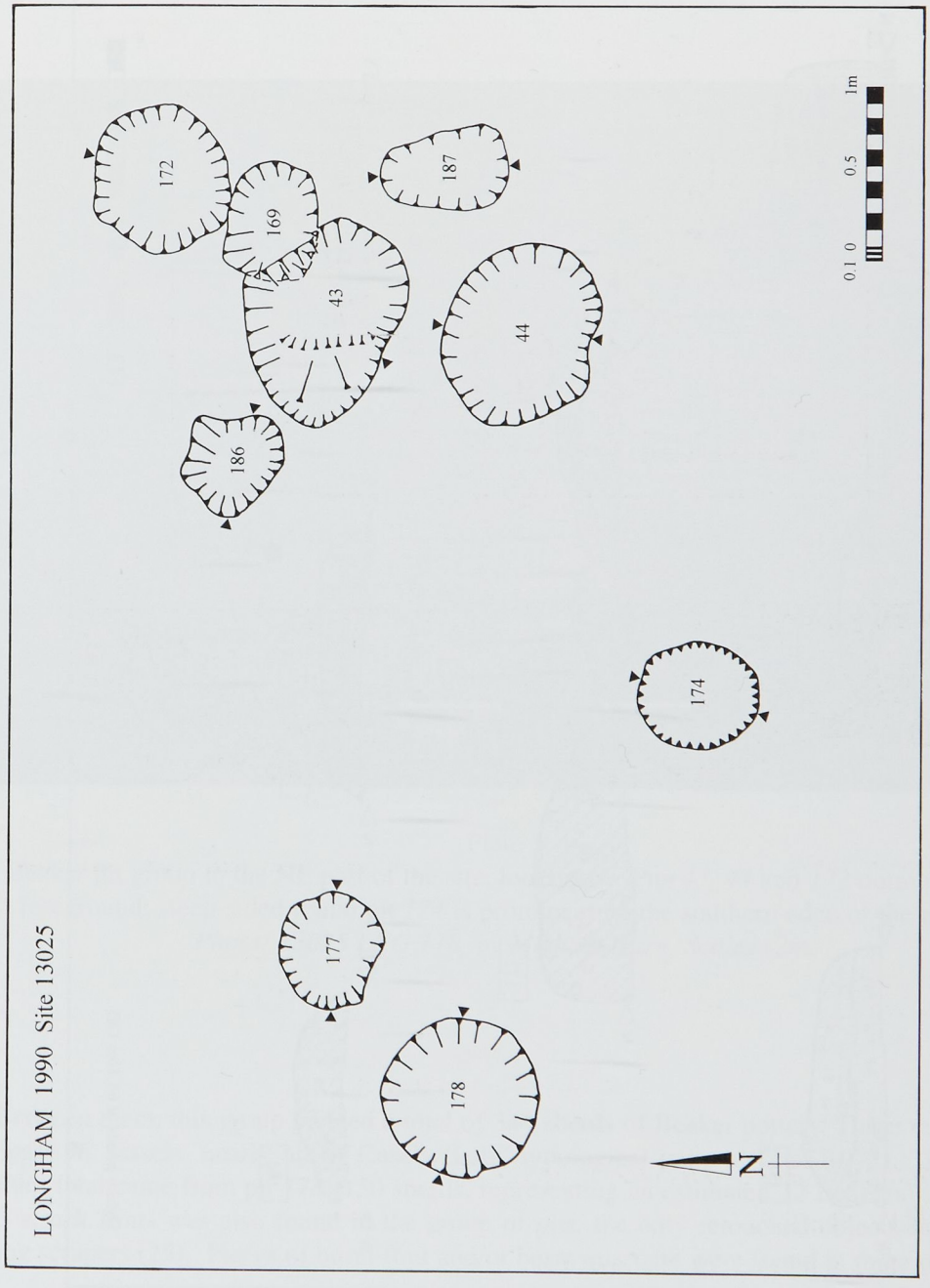

Fig.5
Plan of Beaker pits in the NE part of the site

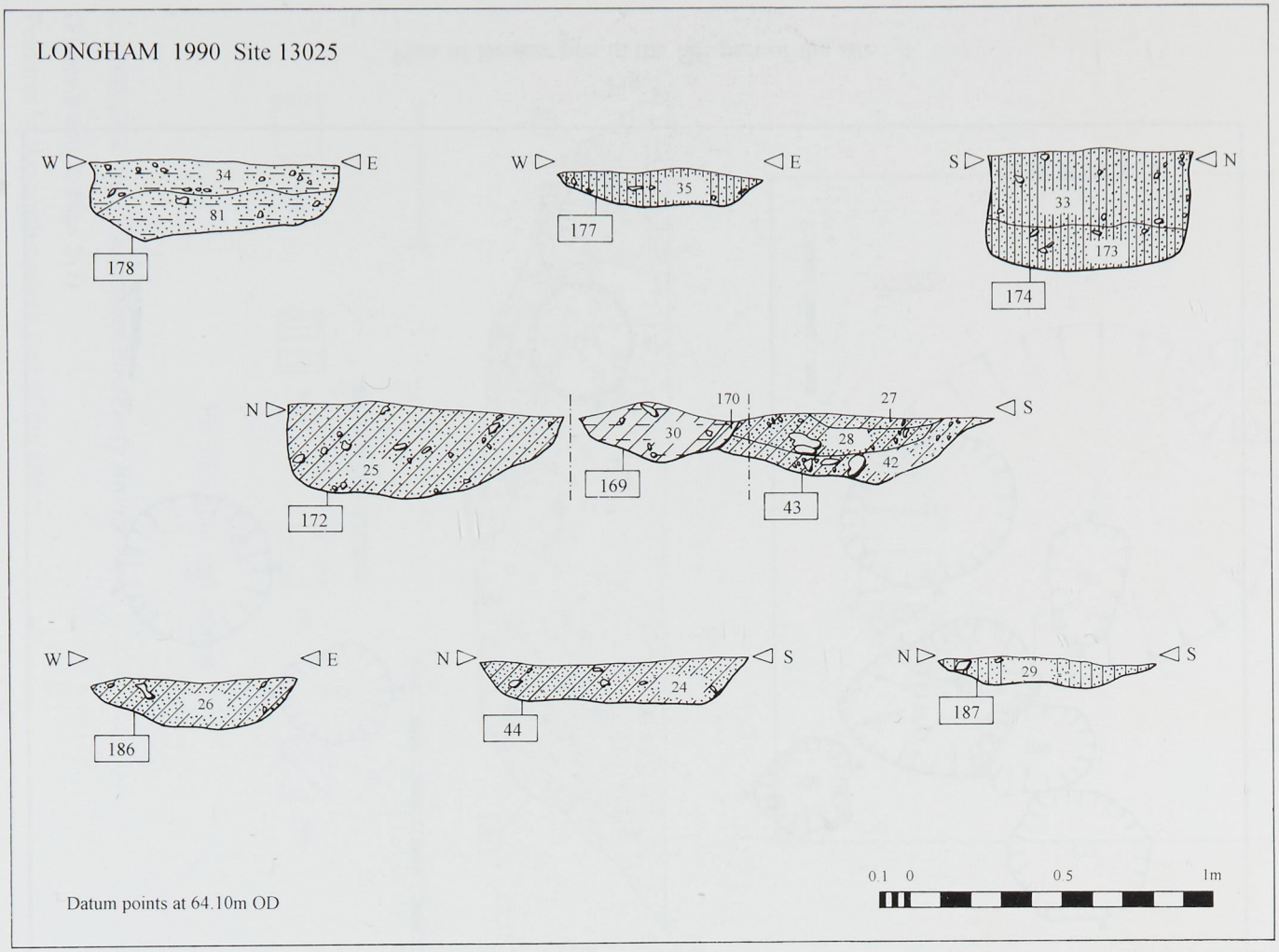

Fig.6
Sections through Beaker pits in the NE part of the site

better-preserved pits were usually steep-sided and flat-based. Pit *174*, which lay on the southern edge of the group, was circular and distinctively sheer-sided. The pits' fills were predominantly brown sandy loams, sometimes with a clayey fraction also present.

Plate 1
Beaker pit group in the NE part of the site, looking W. Pits *43*, *44* and *172* dominate the foreground; steep-sided round pit *174* is prominent on the southern edge of the group.
Photo: 13025 LNG 118, by Michael Hurn. Scales=2m.

Between them, this group yielded a total of 344 sherds of Beaker pottery. These represented at least 96 vessels, nearly all of Case's 'Late' typological pattern (Case 1977). The largest feature-total came from pit *178* (150 sherds, representing an estimated 32 Beakers). A total of 203 struck flints was also found in the group of pits, the only retouched objects represented being scrapers (25). Pieces of burnt flint and/or burnt quartzite were found in three of the pits.

Approximately 15m further to the west another group of three very similar pits was excavated. These (pits *189*, *192* and *196*) have not been illustrated in detail. While none of them produced Beaker, a large assemblage of lithic material, similar to that from the main pit group and including fourteen more scrapers, was collected from pit *189*. Pits *189* and *192* also contained many small fragments of burnt flint.

TABLE 1: Late Neolithic/Bronze Age features in north-eastern part of site, finds summary

pit	*Beaker (min. no. vessels)*							*lithics (no. pieces)*						
	inc	*cm/stp*	*fn/ft imp*	*fp*	*imp*	*imp/inc*	*other*	*cr*	*sht*	*fl*	*bl*	*sp*	*scr*	*re*
43	-	3	4	2	-	1	-	-	4	17	-	1	1	1
44	1	1	1	1	-	-	3	1	-	7	-	1	1	-
169	1	-	-	-	-	-	-	-	-	-	-	-	-	-
172	1	4	5	4	1	-	-	-	1	18	-	4	4	1
174	1	1	6	4	2	1	-	3	3	38	2	10	5	-
177	-	-	-	-	-	-	1	-	-	6	-	1	-	-
178	10	4	3	10	2	2	1	-	2	20	-	3	11	3
186	-	-	-	-	-	-	-	-	-	23	-	8	3	-
187	-	-	-	-	1	-	1	-	-	-	-	-	-	-
189	-	-	-	-	-	-	-	1	-	64	-	12	14	8
192	-	-	-	-	-	-	-	-	-	9	-	-	-	-

Beaker: *inc* - incised; *cm/stp* - comb/stamp impressed; *fn/ft imp* - fingernail/fingertip impressed; *fp* - finger-pinched; *imp* - impressed; *imp/inc* - impressed or incised

Lithics: *cr* - core; *sht* - shatter piece; *fl* - flake; *bl* - blade/blade segment; *sp* - spall; *scr* - scraper; *re* - retouched flake or blade

Features in the north-western part of the site

Six features excavated in the north-western corner of the site produced pottery of later Neolithic and Bronze Age date.

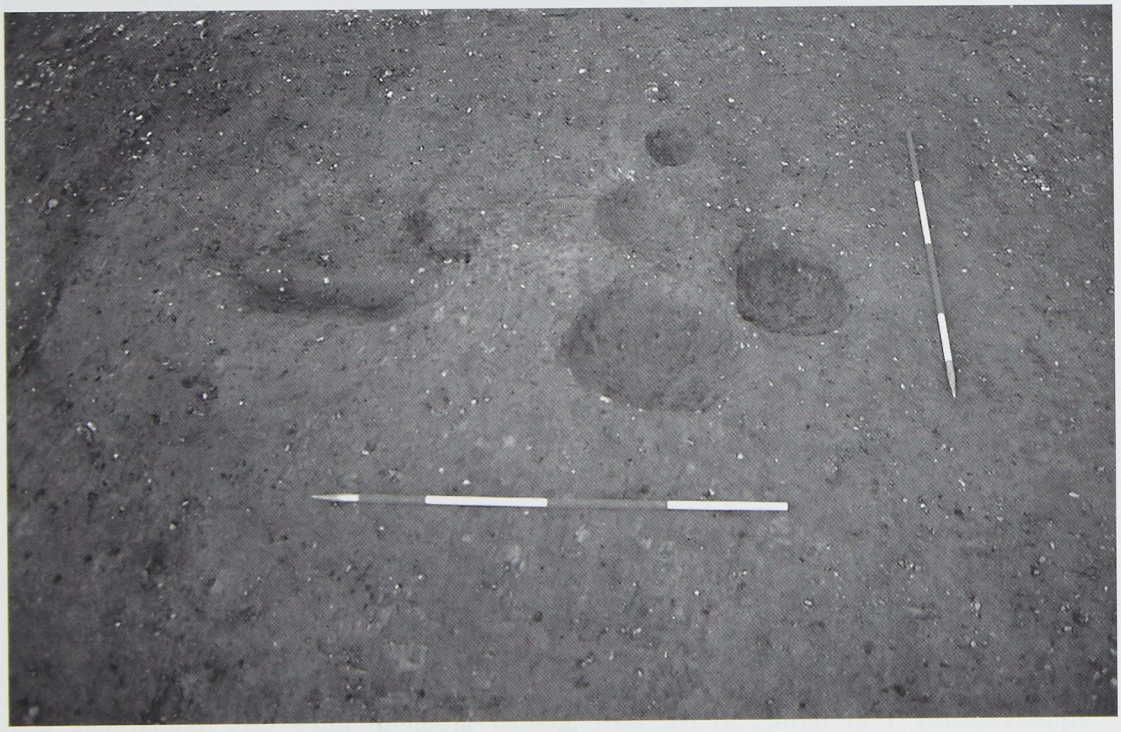

Plate 2

Pit group producing Collard Urn ceramics excavated in the NW part of the site, looking N. The probable hearth *597* may be seen immediately to the left/W of the pits themselves.

Photo: 13025 LNG 117, by Michael Hurn. Scales = 2m.

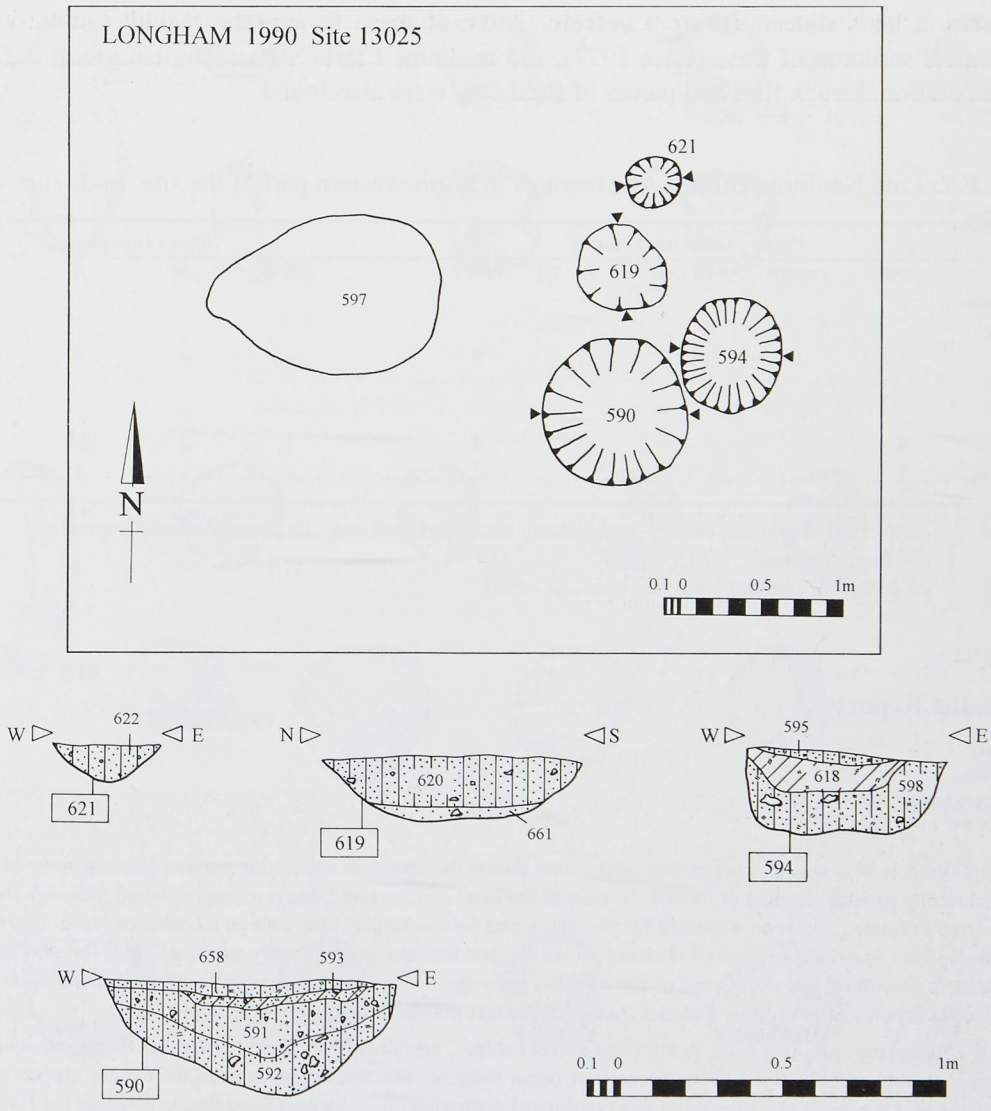

Fig.7
Pits in the NW part of the site, plan and sections.

A group of four subcircular pits (Plate 2; Fig.7), lying very close to each other, were sited *c.* 1m to the west of an ovate patch of heat-discoloured red sand (context *597*), which probably represented the site of a hearth. The features in this concentration were similar in form and dimensions to the Beaker pits already described. One of them, pit *590*, contained 46 sherds of early Bronze Age type, some of them apparently of Collared Urn, along with 29 struck flints. Pit *594* produced two abraded sherds, one of them an Iron Age piece which was probably intrusive.

Approximately 12m further to the west a larger round feature, pit *530* (n. illus.), was excavated. Less than 10m from the western limit of excavation, this cut was *c.* 1.7m in diameter but only 0.2m deep. Excavation produced a total of 46 Beaker sherds. These

represent at least sixteen different vessels. Most of these fit into the 'Middle' style in the typological seriation of Case (Case 1977), and resemble Clarke's East Anglian group in form and decoration. Struck flint and pieces of fired clay were also found.

TABLE 2: Late Neolithic/Bronze Age features in north-western part of the site, finds summary

pit	*Pottery (min. no. vessels)*					*lithics (no. pieces)*			
	cord	*cm/stp*	*fn/ft imp*	*fp*	*other*	*cr*	*sht*	*fl*	*sp*
Beaker									
530	-	6	2	3	5	-	-	3	-
Urn									
590	3	-	-	-	4	1	2	24	2
594	1	-	-	-	2	-	-	1	-

Pottery: *cord* - cord impressed; *cm/stp* - comb/stamp impressed; *fn/ft imp* - fingernail/fingertip impressed; *fp* - finger-pinched

Lithics: *cr* - core; *sht* - shatter piece; *fl* - flake; *sp* - spall

Specialist Reports

Lithics

by John Wymer

Nearly 500 pieces of humanly-worked flint were found during the course of excavating various features, most of them pits, and during general cleaning of the site. In view of the large area involved this is a small number. Although the pits which were examined had been truncated by ploughing and by mechanical clearance in advance of gravel quarrying, the low numbers found during general cleaning do not suggest that any great quantity was lost. All of the artefacts are in very fresh condition, and show none of the abrasion and edge damage in evidence on many collections made from ploughsoil. Complete lists of lithic material from each context may be found in the project archive.

All the flints appear to have been struck from gravel cobbles, presumably obtained locally. Much was obviously of indifferent quality and shattered in the process of being reduced, and this could account for certain aspects of the assemblage as a whole. In the absence of any typological contradictions it seems reasonable to consider the flintwork as representing one phase of occupation, even if this was a lengthy or intermittent one.

The main finished tool-form present is the scraper. These occur in unusually high numbers in proportion to the debitage, with one pit (*189*) containing fourteen scrapers and only 64 flakes and twelve spalls (*ie.* flakes with no dimension greater than 2cm). The same pit also contained eight retouched flakes. Most of the latter, as in other contexts, showed a minimum of secondary working and may well have served the same purposes as the scrapers. The majority of scrapers, however, were neatly made, symmetrical and with good, controlled flaking. This contrasts with the somewhat haphazard nature of much of the primary reduction. Only two of the few cores warrant classification, as a crude single-platform and multi-platform core respectively; the remainder are unmethodical, opportunist examples of flaking. There is no evidence of the use of anything but hard stone hammers. Few flakes can be classified as blades, yet some may have been struck with care from prepared cores. These examples may belong to another period of activity, or perhaps were struck elsewhere.

Catalogue of illustrated flints: scraper assemblages from pits
(Fig.8)
F1-F4 scrapers from pit 172
F5-F9 scrapers from pit 174
F10-F20 scrapers from pit 178
F21-F34 scrapers from pit 189

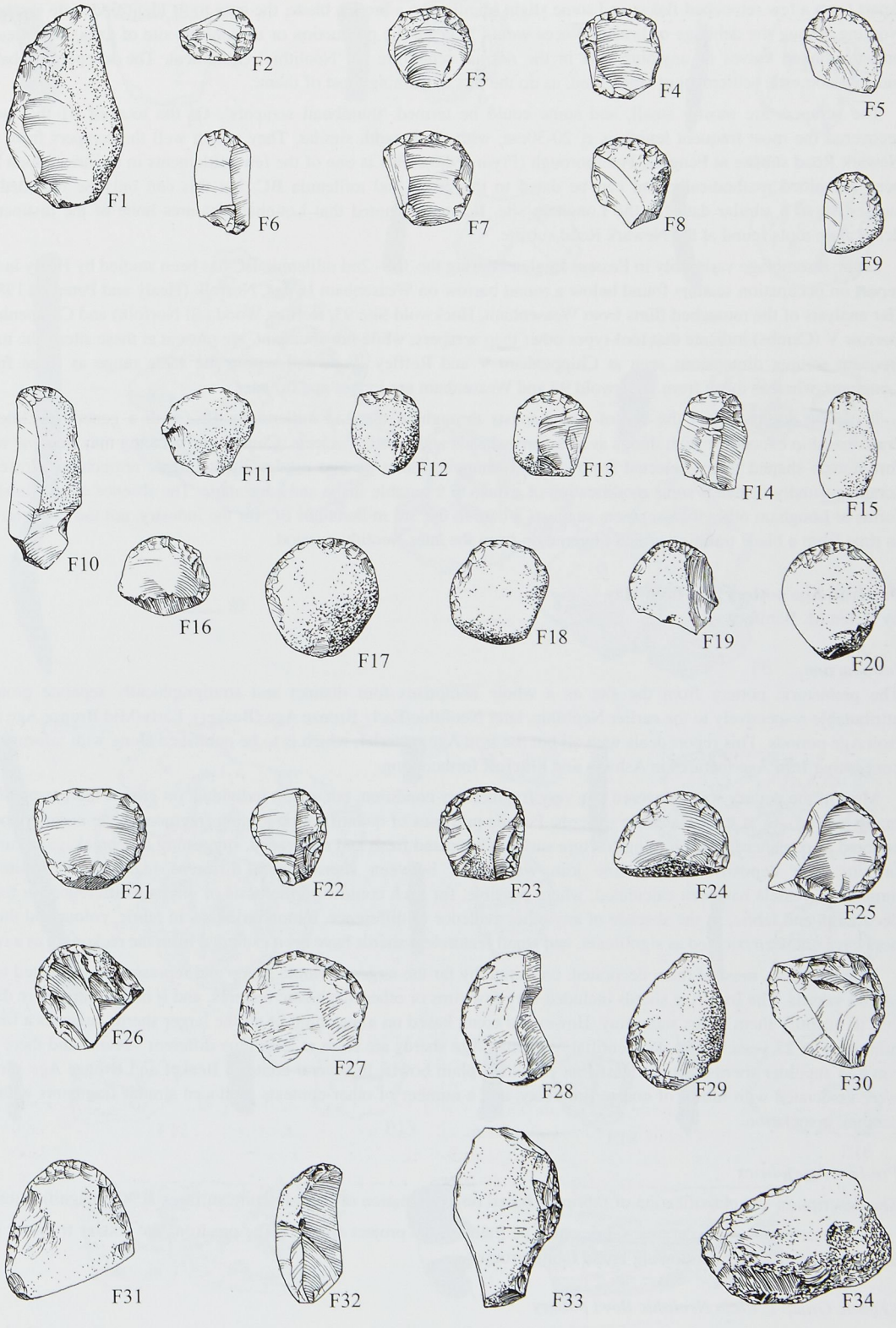

Fig.8
Illustrated lithic material. Scale 1:2

Apart from a few retouched flakes and some slight blunting on a broken blade, the only tools identified were scrapers. Nothing among the debitage or broken pieces would indicate the production or use on this site of axes, arrowheads, pressure-flaked knives or anything else in the normal repertoire of 'Neolithic' equipment. The scrapers probably indicate domestic settlement of some kind, as do the pits containing most of them.

The scrapers are mostly small, and some could be termed 'thumbnail scrapers'. Of the total of 41 that were recovered the most frequent length is *c.* 20-30cm, with the breadth similar. They match well the scrapers from the Newark Road subsite at Fengate, Peterborough (Pryor 1980). This is one of the few settlements in the area which has been examined methodically and can be dated to the 3rd - 2nd millennia BC, but this can only be regarded as suggestive of a similar date for the Longham site. It must be noted that Longham features none of the distinctive denticulate tools found at the Newark Road subsite.

Lithic assemblage variability in Eastern England during the 3rd - 2nd millennia BC has been studied by Healy in her report on occupation scatters found below a round barrow on Weasenham Lyngs, Norfolk (Healy and Petersen 1986). Her analysis of the retouched flints from Weasenham, Hockwold Site 93, Reffley Wood (all Norfolk) and Chippenham Barrow V (Cambs) indicate that tool-types other than scrapers, while not abundant, are present at these sites. The most frequent scraper dimensions seen at Chippenham V and Reffley Wood fall within the same range as those from Longham, whereas those from Hockwold 93 and Weasenham are longer and broader.

It can be accepted that the use of flint persists throughout the 2nd millennium BC, with a general decline in craftsmanship except for such things as axes, arrowheads and prestige objects. Cutting and piercing may be done with fortuitously-shaped flakes selected from piles of knapping debitage and used without further retouching. However scraping usually demands some modification of a flake to a suitable shape and edge angle. The absence of any finished forms at Longham other than scrapers suggests a date in the 3rd millennium BC for the industry, not too far removed in time from a blade tradition which lingered on from the later Neolithic period.

Pre-Iron Age pottery and fired clay
by Helen M. Bamford

Introduction
The prehistoric pottery from the site as a whole comprises four distinct and stratigraphically separate groups, attributable respectively to the earlier Neolithic, later Neolithic/Early Bronze Age (Beaker), Early/Mid Bronze Age and Iron Age periods. This report deals with all but the Iron Age material, which is to be published along with information concerning Iron Age features in Ashwin and Flitcroft forthcoming.

Most of the pottery was recovered in a very fragmentary condition, but within individual pit groups there were often many joining - or at least matching - sherds. For the purposes of quantification joining fragments have normally been counted as one sherd. Most joining fracture surfaces appeared fresh and unabraded, suggesting that breakage occurred *in situ* after deposition. Only one join was noted between sherds from different features. A minimum number of vessels has been calculated, where possible, for each context on the basis of obvious differences in form, decoration and fabric. In the absence of any other evidence of difference, minor variations in fabric, colour and thickness have not been counted as significant, and small featureless sherds have been excluded from the reckoning as a rule.

Beaker sherds, most of them decorated, constitute by far the largest ceramic group and represent an estimated total of 104 vessels. The Iron Age sherds included very few rims or other diagnostic features, and it is therefore more difficult to quantify them in the same way. However a count based on a matching of all the larger sherds suggests a likely minimum of 27 vessels. The 48 identifiably Bronze Age sherds are from at least nine different vessels, and there are rim and shoulder sherds from at least four Neolithic plain bowls. In several contexts Beaker and Bronze Age sherds were associated with lumps of coarse fired clay, and a number of other contexts produced similar fragments without ceramic association.

Pre-Iron Age fabrics
The description and classification of fabrics is based on examination of fresh fracture surfaces at 30x magnification.

Full descriptions of all ceramic fabrics may be found in the project archive. The pre-Iron Age pottery from the site may be divided into the following broad fabric groups.

Fabric Group I: Plain Neolithic Bowl pottery

Medium hard or (less frequently) medium soft and slightly friable; texture moderately close, sometimes with short, fine internal fissures; structure slightly laminar or with a distinct 'grain' aligned with the sherd wall; some indications of coil construction.

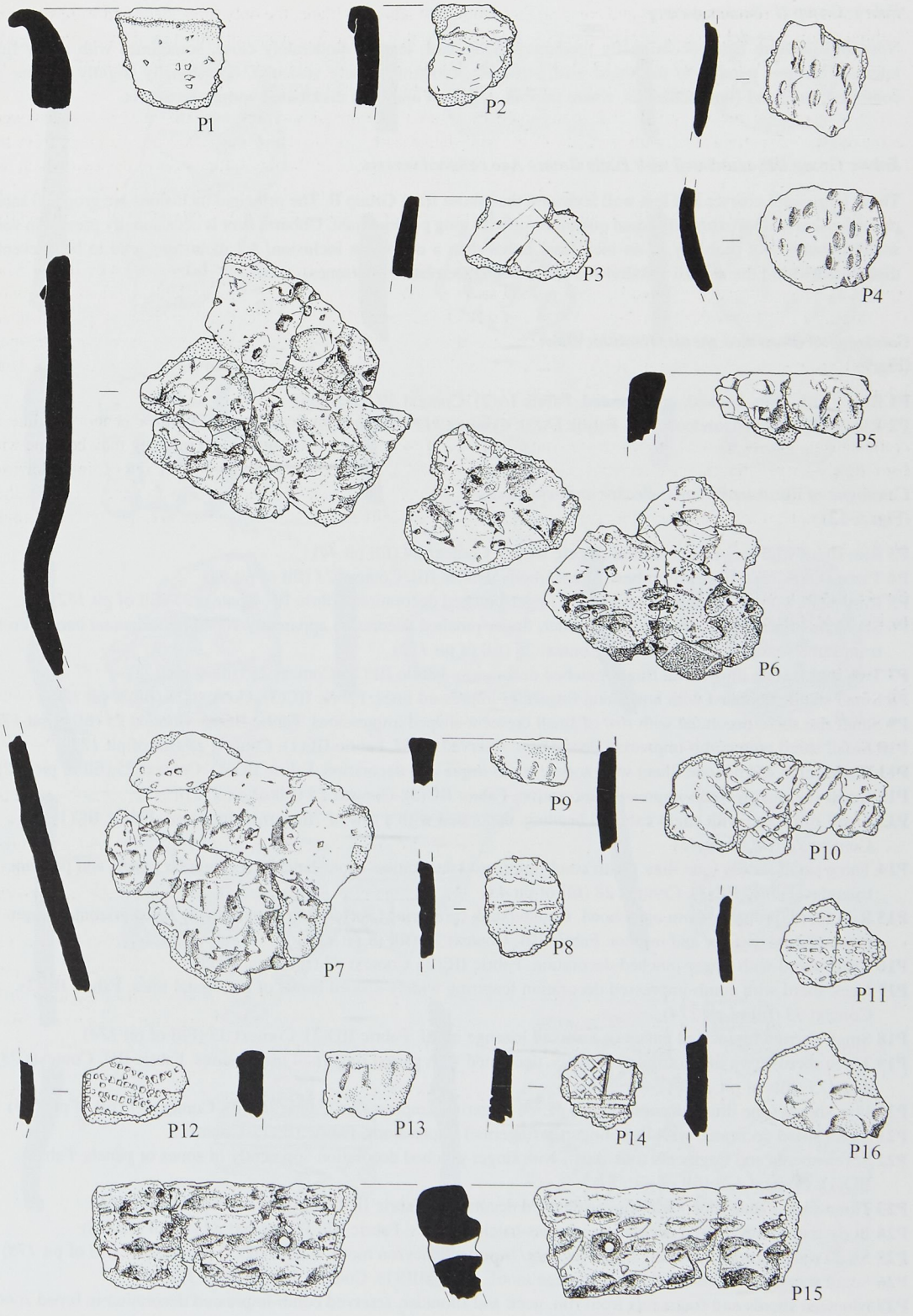

Fig.9
Illustrated pottery (P1-P16). Scale 1:2.

Fabric Group II: Beaker pottery

Normally medium hard, occasionally medium soft or hard; texture moderately close, sometimes with a few fine internal fractures parallel to the sherd wall; structure sometimes finely vesicular, occasionally slightly laminar or contorted; grog and flint inclusions, where present, are often unevenly distributed within the matrix.

Fabric Group III: associated with Early Bronze Age collared vessels

These fabrics are coarser and less well levigated than those from Group II. The principal inclusions are grog and sand, present either in approximately equal quantities or with grog predominant. Unburnt flint is occasionally present in very small amounts, but probably as an incidental rather than a deliberate inclusion. All inclusions tend to be unevenly distributed within the matrix. Subdivision is according to relative coarseness.

Catalogue of illustrated sherds: Neolithic Bowl
(Fig.9)

P1 Rim sherd. Thin, hooked, undecorated. Fabric IA(2). Context *39* (cleaning)
P2 Rim sherd. Beaded, undecorated. Fabric IA(3). Context *312* (fill pit *305*)

Catalogue of illustrated sherds: Beaker and related
(Figs 9-12)

P3 Rim sherd with incised decoration. Fabric IIC(1). Context *24* (fill pit *44*)
P4 Three sherds (two illus.) from base of neck/body. Fabric IIE. Context *24* (fill of pit *44*)
P5 Rim sherd with fingernail-impressed and finger-pinched decoration. Fabric IIF. Context *25* (fill of pit *172*)
P6 Six sherds (three illus.) from neck/shoulder, finger-pinched decoration apparently zoned in horizontal bands. Prob. from same vessel as P5. Fabric IIF. Context *25* (fill of pit *172*)
P7 Two sherds (one illus.) with finger-pinched decoration. Fabric IIF(2). Context *25* (fill of pit *172*)
P8 Small sherd decorated with horizontal fingernail-impressed lines. Fabric IIC(3). Context *25* (fill of pit *172*)
P9 Small rim sherd decorated with row of small crescent-shaped impressions. Fabric IIE(4). Context *25* (fill of pit *172*)
P10 Small sherd with comb-impressed decoration, reserved motif. Fabric IIE(1). Context *25* (fill of pit *172*)
P11 Three small sherds (one illus.) with zoned, comb-impressed decoration. Fabric IIG(1). Context *25* (fill of pit *172*)
P12 Small sherd with comb-impressed decoration. Fabric IIC(3). Context *25* (fill of pit *172*)
P13 Small rim sherd with slight external beading, decorated with a row of ?fingernail incisions. Fabric IIC(1). Context *27* (fill of pit *43*)
P14 Three small sherds (one illus.) with comb-impressed decoration, cross-hatched rectangular panels and pendant triangles. Fabric IIC(3). Context *28* (fill of pit *43*)
P15 Rim sherd, probably from open bowl. Countersunk (pre-firing) perforation 17mm below rim, horizontal finger-pinched rims exterior and interior. Fabric IIB. Context *28* (fill of pit *43*)
P16 Small sherd with finger-pinched decoration. Fabric IIE(2). Context *42* (fill of pit *43*)
P17 Neck sherd with comb-impressed decoration featuring widely-spaced bands of horizontal lines. Fabric IIE(2). Context *33* (fill of pit *174*)
P18 Small sherd with incised lattice or reserved lozenge motif. Fabric IID(2). Context *33* (Fill of pit *174*)
P19 Three sherds (two illus.) from neck/body, decorated with paired fingernail impressions. Fabric IIH. Contexts *33* and *173* (fills of pit *174*)
P20 Five sherds (one illus.) decorated with paired fingernail impressions. Fabric IID(2). Context *33* (fill of pit *174*)
P21 Small sherd decorated with light fingertip/fingernail impressions. Fabric IIE(1). Context
P22 Seven sherds and fragments (one illus.) with finger-pinched decoration apparently in zones or panels. Fabric IID(1). Context *173* (fill of pit *174*)
P23 Three sherds (one illus.) with finger-pinched decoration. Fabric IID(2). Context *173* (fill of pit *174*)
P24 Body sherd with incised decoration in cross-hatched bands. Fabric IIF(3). Context *34* (fill of pit *178*)
P25 Small rim sherd with incised ?filled lozenge/?reserved chevron motif. Fabric IIE(3). Context *34* (fill of pit *178*)
P26 Small sherd with incised ?floating lozenge motif. Fabric IIE(1). Context *34* (fill of pit *178*)
P27 Nineteen sherds and fragments from rim, neck and shoulder, reserved comb-impressed decoration in broad zone. Fabric IIC(2). Contexts *34* and *181* (fills of pit *178*)
P28 Seven sherds (three illus.) including parts of rim and neck, incised decoration including reserved zig-zag motif. Fabric IIE(1). Contexts *34* and *181* (fills of pit *178*)

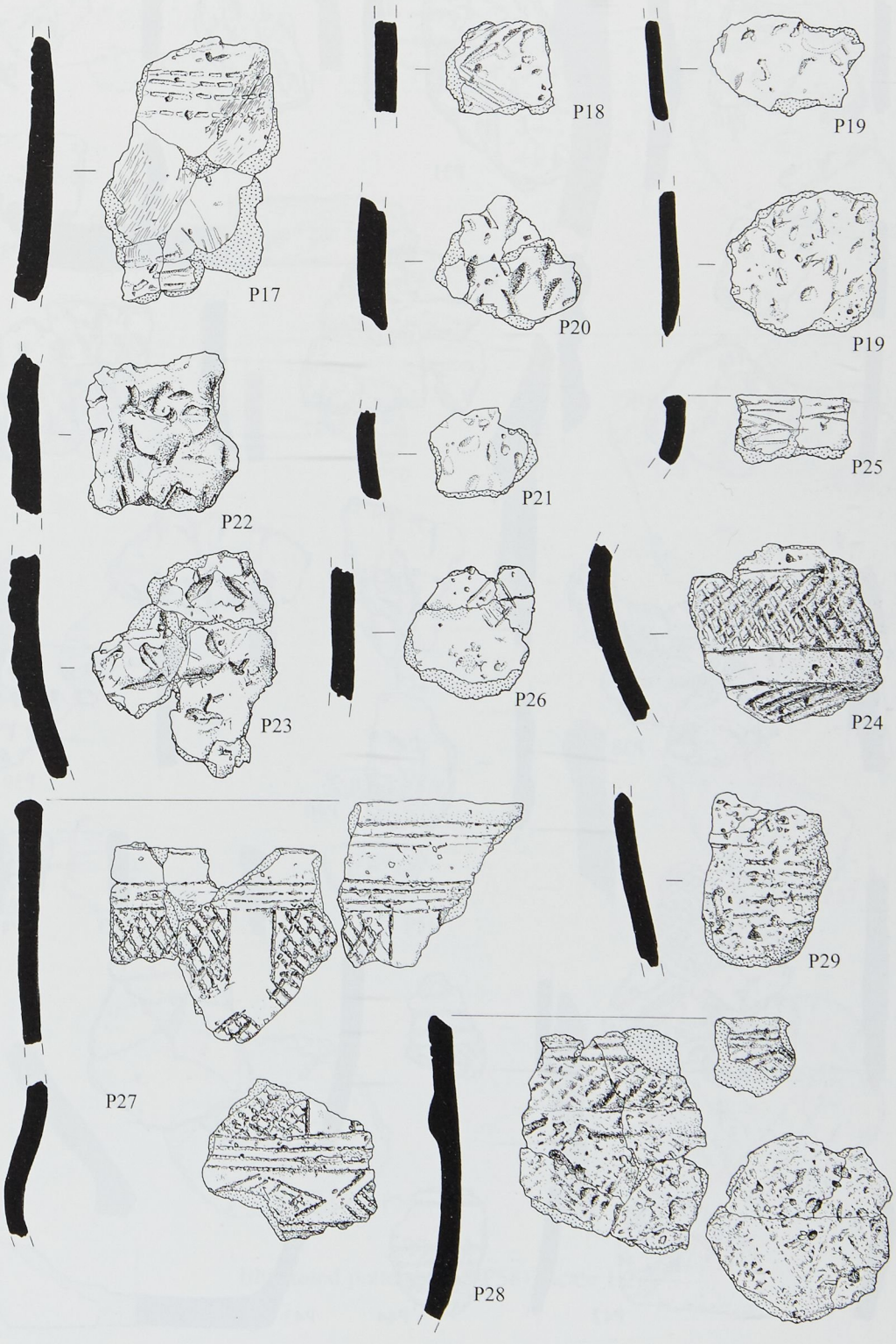

Fig.10
Illustrated pottery (P17-P29). Scale 1:2.

Fig.11
Illustrated pottery (P30-P44). Scale 1:2.

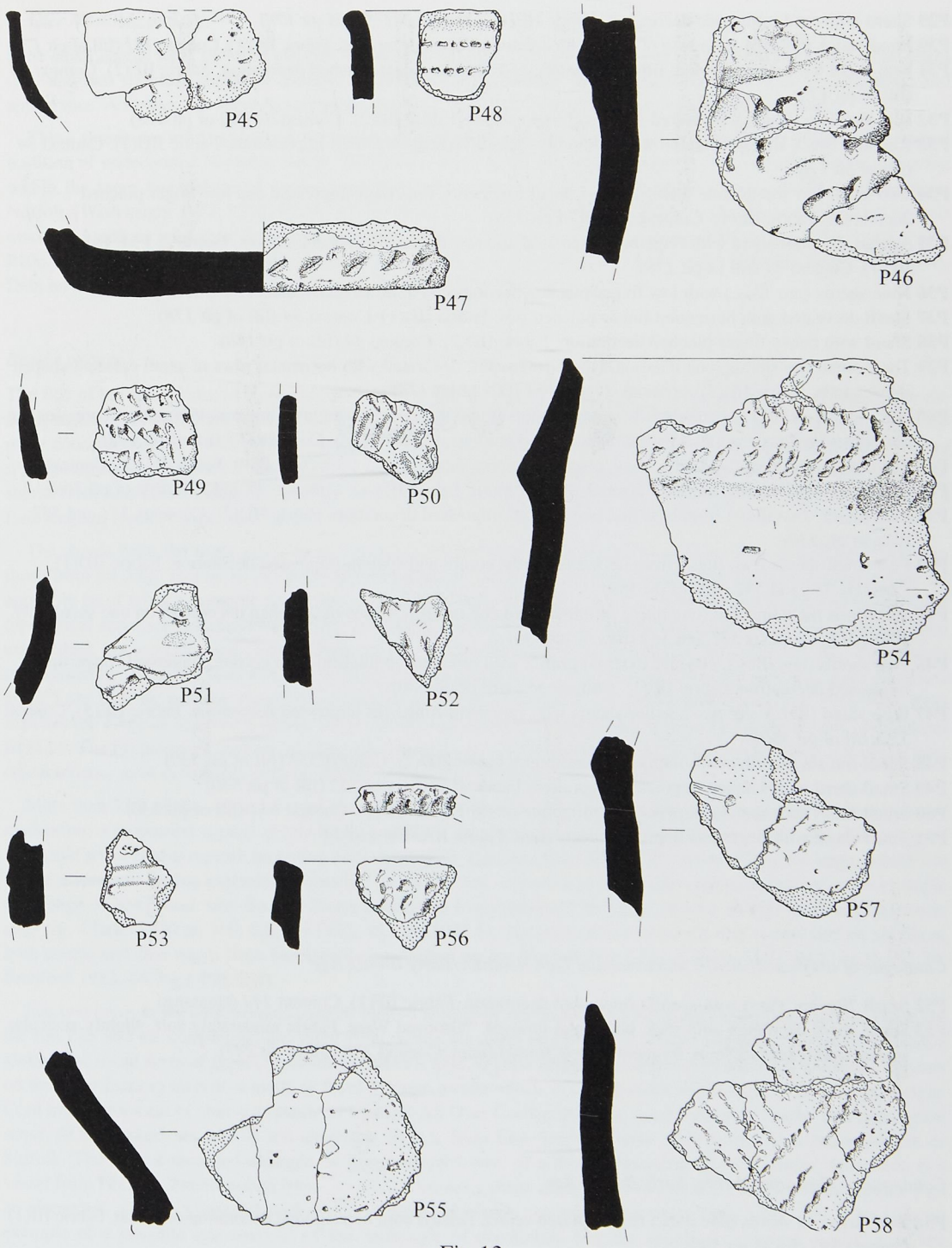

Fig.12
Illustrated pottery (P45-P58). Scale 1:2.

P29 Sherd with cord-impressed decoration. Fabric IIE(1). Context *181* (fill of pit *178*)
P30 Small sherd, probably from base of neck, with comb-impressed decoration. Fabric IIC(1). Context *181* (fill of pit *178*)
P31 Rim sherd with raised cordon, fingernail-impressed and low finger-pinched decoration. Fabric IIE(2). Context *34* (fill of pit *178*)
P32 Rim sherd decorated with paired fingernail impressions. Fabric IIE(2). Context *34* (fill of pit *178*)
P33 Rim and ?neck sherd decorated with randomly-spaced vertical fingernail impressions. Fabric IID(1). Context *34* (fill of pit *178*)
P34 Two small rim sherds (one illus.) and two small fragments, fingernail-impressed and low finger-pinched decoration. Fabric IIE(1). Context *34* (fill of pit *178*)
P35 Angled shoulder sherd with fingernail-impressed and low finger-pinched decoration. ?Same as P34. Fabric IIE(1). Context *34* (fill of pit *178*)
P36 Nine sherds (one illus.) with low finger-pinched decoration. Fabric IID(2). Context *34* (fill of pit *178*)
P37 Sherd decorated with horizontal finger-pinched ribs. Fabric IID(1). Context *34* (fill of pit *178*)
P38 Sherd with heavy finger-pinched decoration. Fabric IID(2). Context *34* (fill of pit *178*)
P39 Three small rim sherds (one illus.) and three fragments, decorated with horizontal rows of small crescent-shaped impressions. Fabric IIE(3). Contexts *34* and *181* (fills of pit *178*)
P40 Forty-seven (mostly small) shrerds and fragments (three illus.) decorated with fingernail/fingertip impressions in horizontal cordons separated by low undecorated cordons. Fabric IIC(2). Context *181* (fill of pit *178)*
P41 Small rim sherd decorated with rows of small crescent-shaped impressions (*c.f.* P39). Fabric IIC(3). Context *29*
P42 Ten neck/?body sherds, incised diagonal chequer motif. Fabric IID(1). Contexts *30* and *170* (fills of pit *169*)
P43 Five sherds (two illus.) from base and body, comb-impressed decoration. Fabric IID(2). Contexts *531* and *532* (fills of pit *530*)
P44 Five small sherds (two illus.) from neck and ?body, comb- and spatula-impressed decoration. Fabric IID(1). Contexts *531* and *532* (fills of pit *530)*
P45 Six sherds including rim (one illus.) of thin-walled cup or bowl, traces of ?stabbed decoration on one sherd only. Fabric IIA. Contexts *531* and *532* (fills of pit *530)*
P46 Two sherds (one illus.), concave external profile with pronounced thickening or cordon, fingernail-/fingertip-impressed decoration. Fabric IIE(1). Context *552* (fill of pit *530)*
P47 Base sherd (illus.) and two smaller sherds with fingernail-/fingertip-impressed decoration. Fabric IIE(3). Context *552* (fill of pit *530)*
P48 Small rim sherd with comb-impressed decoration. Fabric IID(1). Context *552* (fill of pit *530)*
P49 Small sherd with stabbed/impressed decoration. Fabric IIA. Context *552* (fill of pit *530)*
P50 Small sherd with spatula-impressed herringbone motif. Fabric IID(1). Context *552* (fill of pit *530)*
P51 Small sherd with fingernail-impressed decoration. Fabric IIA. Context *14*

Catalogue of illustrated sherds: indeterminate Late Neolithic/Early Bronze Age

P52 Small ?Beaker sherd with spatula-impressed decoration. Fabric IIF(1). Context *144* (cleaning)
P53 Small sherd decorated with wide horizontal grooves. ?Grooved Ware. Fabric moderately soft, slightly vesicular, sparse sand 0.4mm-0.8mm, frequent grog 0.3mm-1.0mm. Context *288* (fill of pit *287).*

Catalogue of illustrated sherds: Early Bronze Age

P54 Two large rim sherds (one illus.) from collared vessel, twisted cord herringbone decoration on collar. Fabric III(1). Context *592* (fill of pit *590)*
P55 Base sherd (two joining fragments), expanded foot, ?from same vessel as P54. Fabric III(1). Contexts *591* and *592* (fills of pit *590)*
P56 Small rim sherd with twisted cord-impressed decoration on rim and exterior. Fabric II(2). Context *592* (fill of pit *590*
P57 Nine sherds (one illus.) including base of collar and sherds with convex external profile. Fabric III(1). Contexts *591* and *592* (fills of pit *590)*
P58 Ten sherds and fragments (one illus.), slightly convex external profile, twisted cord-impressed decoration. Fabric III(1). Contexts *591* and *592* (fills of pit *590*).

Earlier Neolithic pottery

Nine small sherds were found in pit *305*. Three of these were from plain bowls of earlier Neolithic type, a rim sherd (P2) and two shoulder sherds of shallow 's' profile. The remainder, though featureless, were of similar fabric and appearance. A further rim sherd from a plain Neolithic bowl (P1) was also found during surface cleaning.

These sherds are too fragmentary for precise classification, but the rims forms fit comfortably within the regional tradition of undecorated Neolithic bowls. The narrow hooked rim and thickened neck of P1 resemble forms occurring within the large assemblage of undecorated bowls from the Neolithic settlement at Broome Heath, Ditchingham, Norfolk (Wainwright 1972; P220, P270). P2, however, is more like the rims occasionally found on undecorated vessels associated with or related to decorated pottery of Mildenhall type, as found at Spong Hill (Healy 1988; P110, P102, P106-7). The sand- and flint-tempered fabrics are typical of earlier Neolithic pottery from Norfolk (Healy 1984, 104). Data on these pottery types from elsewhere in the county are rarely more precise.

Beaker pottery

The fills of ten pits produced Beaker pottery, all but one of them (pit *530*) part of the dense cluster of features in the north-eastern part of the site. Two other layers also produced small numbers of Beaker sherds. The pottery from the main concentration of Beaker pits is so different from that from the more westerly pit *530* that it implies a quite separate episode of activity at the site. The two assemblages are broadly comparable to the two separate groups of sherds from Site 15995 immediately to the north, which were identified as being respectively of Clarke's Southern and East Anglian types (Wymer and Healy 1996).

The sherds from the main group of pits include a greater range and variety of stylistic traits and fabric types than those from pit *530*. Insofar as the forms and decorative schemes may be reconstructed or deduced, however, they all appear to be of types acceptable within the Late Beaker phase defined by Case (1977) or Steps 6 and 7 of the regional typological sequence suggested by Lanting and Van der Waals (1972). The date of this Late Beaker phase has not been established, but available radiocarbon dates suggest a span between approximately 2100 - 1700 cal. BC. The vessels represented by sherds P27 and P28 are undoubtedly from Beakers of Clarke's Southern series, probably to be classified as of Late (S3) or perhaps Final (S4) Southern style. The decoration of some small sherds (*eg* P10, P14, P18) matches the range of reserved patterns, filled patterns and metopic schemes which are a diagnostic feature of Southern Beakers. The frequency of incised (as opposed to impressed) decoration was regarded by Clarke (*ibid.*, 226) as a 'late' characteristic, most commonly seen on Beakers of his Final Southern (S4) pattern.

More than 53% of the estimated total of vessels from this 'late' Beaker group bore fingernail-impressed or pinched rustication, a proportion typical in late Beaker domestic assemblages in the region (Bamford 1982, 64). The range of rusticated styles is also typical, including both small (P31, P33) and large (P7, P23) vessels. While the large, coarse rim P15 is unusual in having extensive decoration on its internal surface, it is nonetheless quite acceptable as an example of a range of bowls and 'non-Beaker' forms sometimes found amongst the more familiar shapes on Beaker domestic sites (*eg.* Clarke 1970 no.310; Gibson 1982, 483, fig.RH1:6). The perforation below the rim is matched on sherds of both coarse and fine wares from Hockwold-cum-Wilton on the Norfolk Fen Edge (Gibson 1982, 442, fig.HcW2:20; Bamford 1982, 84, fig.1:P95.008).

Just two items in the assemblage could be viewed as slightly anomalous in a Southern Beaker association. These are the rim P25 and the cord-impressed sherd P29. While the angle of P25 is not entirely certain, it seems to be from a globular or ovoid form of vessel resembling Clarke's East Anglian series. The decoration, although indistinct, appears on the other hand to include a motif of filled lozenge panels which would be more appropriate to the Southern style. Cord impressions are of course a feature of Clarke's All Over Corded Beakers, a style which is ' early' in a typological sense. AOC Beakers are rare, if not altogether absent, from East Anglia, Clarke 1970 listing none from Norfolk or Suffolk. The closest recorded example, in geographical terms, of a Beaker featuring all-over corded decoration is a vessel from Fengate, Peterborough (*ibid.*, no.642). This has a shape comparable to that of a Final Southern Beaker with an elongated, almost cylindrical neck and a pronounced cordon just below the rim. Clarke (*ibid.*, 66) notes it as an example of a possible late survival of this technique of decoration, and the apparently careless execution of the decoration on P29 could perhaps be interpreted as similarly significant in this regard. The abraded condition of the sherd might give colour to the notion that it was residual from an earlier phase of activity, but for the fact that some sherds of indubitably Late style Beakers (*eg.* P28) are in an even worse state.

The variety of fabric types present in this group could also be adduced as possible evidence that the assemblage is not entirely homogeneous, but the explanation for this is more likely to be functional (Clarke 1970, 258; Gibson 1982, 70-3). The comb-impressed pottery is predominantly of sandy or flint-gritted fabric, as are 40% of the vessels with lighter, non-plastic forms of fingernail and fingertip-impressed decoration. The rusticated sherds with finger-pinched

and raised decoration, which tend to be thicker and often represent larger vessels, are predominantly of fabrics containing grog.

By contrast, many of the sherds from pit *530* suggest the East Anglian style in Clarke's classification. They include the apparently ovoid form and limited decoration of P43, the out-turned rim of P48 and, not least, the decorative style of P44 with its narrow zones of spatula-impressed 'herringbone' decoration bordered by comb-impressed lines, and P49 and P50 with their cuneiform jabbed and spatula-impressed decoration respectively. Lanting and Van der Waals assign this material to Steps 3 and 4 of their sequence, and Case brackets it within his 'Middle' Beaker phase. On these grounds it could be argued that the sherds as a group are significantly earlier than those from the main pit concentration. However the rusticated pottery included with them features part of a large, coarse vessel with heavy plastic rustication and a pronounced cordon (P46). These features are associated normally, if not exclusively, with Late Beaker wares and in particular with the Southern Beaker style (Clarke 1970, 258; Bamford 1982, 64). However, sherds decorated with fingernail impressions, and even occasionally with a light form of finger-pinched rustication, do occur in association with Middle style Beakers, as at Weasenham Lyngs (Healy and Petersen 1986, 94, fig.85). It may also be noted, for whatever it is worth, that although the Beaker fabrics from pit *530* are more restricted in range than the pottery from the other Beaker pits, and tend to be noticeably sandier; there is not the sharp dichotomy seen at Longham Site 15994 (Wymer and Healy 1996) between Middle (sand- and flint-gritted fabrics) and Late vessels (soft, grogged fabrics).

Early Bronze Age pottery

Early Bronze Age pottery clearly other than Beaker came from two pits in the north-western corner of the site, as summarised below. Forty-six of the 48 sherds found were from pit *590*. The form and decoration of these vessels displays obvious affinities with Collared Urns, although P58 at least does not seem to be from a collared vessel. The coarse, grogged fabrics and smoothed surface finish of the sherds are also typical of the Early Bronze Age ceramic tradition. Burgess (1980, 84; 1986, 341) is of the opinion that true Collared Urns are a specialised form of funerary pottery which does not occur in 'domestic' contexts, and this may well be true of the large forms. On the other hand P54, and perhaps P55, would probably not excite comment if found in a funerary context.

Assemblages which are unquestionably domestic in character and which include pottery of this type are certainly infrequent, if not absolutely rare, in Britain, and are generally fairly small in size. Several have been found in Norfolk and Suffolk, however, most notably a series from sites on sandhills and ridges on the eastern Fen edge. Sherds of collared vessels with twisted-cord decoration are present in relatively small numbers amongst biconical, bucket and cordoned urns from the prolific sites at Hockwold-cum-Wilton Site 5310, Norfolk (Healy 1996) and from Mildenhall Fen, Suffolk (Clark 1936; Gibson 1982, 454-7). There is also a relatively large assemblage characterised by collared forms and twisted-cord decoration from a site at West Row Fen, Mildenhall, Suffolk (Longworth 1984, nos 1478-1514). Elsewhere in Norfolk, several sherds of collared vessels were found at the multi-period occupation site at Redgate Hill, Hunstanton (Healy, Cleal and Kinnes 1993), while a group of sherds from a multi-period site at Edingthorpe bears quite a close similarity to the present group. They include sherds from undecorated collared vessels, and what were probably barrel-shaped pots with extensive twisted-cord decoration of the kind seen on P58. Finally there are a few sherds of Early Bronze Age type from Longham Site 7329 (Wymer and Healy 1996). Most of these are too fragmentary to be of much use for comparative purposes, but there is one sherd which could be from a collared vessel.

The dating of Collared Urns is still far from precise, but generally radiocarbon dates indicate a span roughly between 3700 BP and 3150 BP (*c.* 2050 - 1475 cal. BC: Longworth 1984, Appendix II). This permits a considerable overlap with the Late Beaker phase. Dates of samples from West Row Fen, at one standard deviation, have a range of 3700 BP - 3320 BP (2130 BC - 1530 cal. BC).

Charred plant remains

by Val Fryer and Peter Murphy

One hundred and fifteen soil samples were collected from the fills of archaeological features cut into gravel (pits, ditches, post-holes), and from some deposits within natural features which displayed visible charcoal. Many of these produced no datable artefacts, and cannot be dated on any other grounds. Consequently, although all samples were initially processed, only some 37 were analysed. Published here are the results from the sixteen samples taken from pre-Iron Age contexts.

Charred plant remains were extracted by water flotation, using a 0.5mm collecting mesh. The dried flots, or subsamples of them, were sorted under a binocular microscope at low power. Several samples included abundant fragments of hazelnut shell (*Corylus avellana*): not all fragments were extracted from flots but a approximate estimate

of the number of nuts represented was made. Charcoal fragments larger than 6mm were separated for identification. Full tabulation of the results of analysis are deposited with the Site Archive. Full details of samples and charred plant material recovered are also given in Murphy 1991.

Samples were taken from pits associated with both Beaker and Early Bronze Age pottery. Although each of these groups comprises only a few samples, generally containing low quantities of charred plant material, the assemblages from these features are quite distinctive.

TABLE 3: Summary of frequencies of main categories of plant remains

	Beaker pits	*EBA pits*
Corylus (hazel) nutshell	12	4
cereals	5	-
weed seeds	3	1
roots/rhizomes/tuber frags	2	1
charcoal frags >6mm	9	2
total samples	12	4

The results from the Beaker and Early Bronze Age contexts are particularly useful because there is, as yet, little information about plant economies of this period in Norfolk. Pre-Iron Age settlement sites previously investigated in Norfolk have either produced sparse assemblages of material (*eg.* Grimes Graves: Legge 1981; Redgate Hill, Hunstanton: Murphy 1993), or else lie within subsequently-reoccupied areas and have produced assemblages which might include later, intrusive plant material (*eg.* Spong Hill: Murphy 1988). It seems probable that a substantial body of data on earlier prehistoric plant economies will be gained mainly by a slow accretion of results from isolated pit groups, such as those sampled at Longham.

Samples from the Beaker features were characterised by relatively abundant charcoal, mostly of oak with some hazel/alder, abundant fragments of hazel nutshell, occasional cereal grains including barley (*Hordeum* sp), a few weed seeds and, in two samples, fragments of root or rhizome. The features producing Early Bronze Age pottery produced no cereals but were otherwise similar. Assemblages of this general type have been reported from many Neolithic sites in lowland Britain, and are thought to indicate a continued substantial reliance upon plant food gathering after the introduction of agriculture (Moffett *et al.* 1989). These authors note the paucity of evidence from the early part of the Bronze Age, but suggest that the Neolithic pattern may have persisted. The results from Longham are consistent with this view.

Discussion

Earlier Neolithic (c. 5000 - 3200 BC)

Apart from the very small quantity of plain bowl pottery (including illustrated sherd P1) recovered during site clearance, evidence for this period from the Ennemix quarry is confined to a solitary pit (*305*) and the small number of artefacts which it contained. No radiocarbon dates, nor any other specific indicators of date or chronology, are available for this feature, nor were any plant remains found. Although these factors do not help our appraisal of human activity here during the 5th and 4th millennia BC, this apparently solitary feature and its context are still of some interest.

The excavated pottery is only useful for dating the pit in fairly general terms, since Grimston and other earlier Neolithic plain bowl wares clearly had an exceptionally long currency during the 4th millennium BC (Wainwright 1972, 75). Most Norfolk radiocarbon dates for 'earlier Neolithic' wares do, however, fall within the 4th millennium cal. BC (*eg.* Healy 1988, table 63); thus our present knowledge offers reasonable certainty that pit *305* pre-dated the occupation of the site by Beaker-using peoples.

Despite the size of the area examined at Longham and Bittering during the course of excavations and watching briefs since 1978 (Wymer and Healy 1996), there is a general lack of characteristically 'earlier Neolithic' material from these interventions, apart from the discovery of a single, similarly-isolated, pit containing bowl pottery at Longham Site 7239 to the east. Human activity here before the end of the 4th millennium BC was probably not intense, and may well have occurred in a wooded landscape still pocked with partially-infilled periglacial hollows. Occupation was probably intermittent or cyclical, rather than sedentary. Healy's study of the earlier Neolithic occupation at nearby Spong Hill supports the possibility that even superficially 'village'-like concentrations of features revealed by excavation may actually be palimpsests, caused by repeated visits to the same location over a long period of time. This suggestion is further supported by the very wide range of radiocarbon dates derived from individual deposits containing Neolithic bowl pottery at the Broome Heath site (Wainwright 1972, 75), extending from 4500-4000 BC (BM-679; 5424±117 BP) to 2920-2500 BC (BM-755; 4167±78 BP).

Comparisons with Spong Hill and Broome Heath suggest that pit *305* from Longham is quite characteristic of earlier Neolithic features recorded at occupation sites in Norfolk (Healy 1988, 105). Its apparent isolation, however, contrasts with the multiplicity of large pits at both of these other sites. While the human activities represented by the Longham pit ware not necessarily intrinsically different from those taking place on the 'settlement' sites cited above, maybe the site was not frequented over and over again in the same manner. Several factors could have contributed to such a lack of intensity. One of these is the site's distance from running water, although Wymer and Healy suggest that partially-infilled periglacial depressions of the kind recorded throughout the area might have been effective as *ad hoc* water-holes. Another is the fact that the site - despite its location on a deposit of natural sand and gravel - actually lies within the heart of the poorly-drained central Norfolk Boulder Clay plateau, a landscape tract which probably supported relatively few people during this period.

Later Neolithic/Early Bronze Age (c. 3200 - 1700 BC)

Introduction

Most of the groups of pre-Iron Age features excavated in the immediate area prior to the 1990 excavations date to this period, with Beaker pottery preponderant (Wymer and Healy 1996). The Ennemix quarry results enhance this pattern. The two pit groups, containing Beaker and 'Early Bronze Age'-type wares respectively, and the solitary Beaker pit *530* may appear rather scanty evidence of human activity during this period, especially considering the size of the area examined in 1990. They may, however, be placed alongside other features from earlier excavations (Wymer and Healy 1996) apparently representing both 'domestic' (Beaker and other pits from Longham Sites 7329 and from Bittering Sites 13023, 15910 and 15995) and 'religious'/'ceremonial' modes of behaviour (Beakers inserted into natural mound at Site 7329).

Dating

Although no radiocarbon determinations were made on material from the 1990 excavations, three others are available from the previous excavations nearby. These are listed as follows; the age-ranges, quoted at two standard deviations, have been calculated using CALIB 2.1 (Stuiver and Reimer 1986).

TABLE 4: Radiocarbon determinations from Longham and Bittering (after Wymer and Healy 1996, 51)

lab. ref.	*radiocarbon date*	*calibrated age-range*	*site*	*context*
HAR-4636	3540(70 BP	2130-1690 cal. BC	Bittering Site 15995	pit *2*; stratified with Late Beaker sherds
HAR-4637	3790(80 BP	2460-1970 cal. BC	Bittering Site 15995	pit *3*; stratified with Late Beaker sherds
HAR-8520	3870(70 BP	2550-2060 cal. BC	Longham Site 7239	pit *1136*; feature inserted into nat. mound, cutting pit containing Middle Beaker sherds

Many previous assumptions concerning the typological seriation of British Beakers have been called into question by the publication of the results of the British Museum Beakers radiocarbon dating programme (Kinnes *et al.* 1991), which has greatly undermined the value of Beaker typology as a dating tool. The Longham determinations indicate the presence of Beaker-using people here during the broad period 2500 - 1700 cal. BC. Despite its similarity to HAR-4637, HAR-8520 seems consistent with the usually-accepted range of Middle Beaker currency. Healy, while acknowledging the discrepancy between HAR-8520 and HAR-4636, argued strongly for contemporaneity between these two deposits on the grounds of the ceramic similarity and physical proximity of the two features (Wymer and Healy 1996, 52). Certainly HAR-4637 lies within the broad chronological zone to which Late Beakers have usually been assigned (Gibson 1982, fig.2).

The 'Early Bronze Age' occupation probably post-dated the Beaker pits, although no radiocarbon dates are available for the Collared Urn and other 'Early Bronze Age' wares from any of the Longham assemblages, nor for any of the other East Anglian sites listed by Helen Bamford in her consideration of this pottery. However it is striking how similar the 'Beaker' and 'Early Bronze Age' pits appear, in proportions, form, distribution and content (the absence of cereal remains from the 'Early Bronze Age' pits is probably not significant given the small amount of sample material summarised in Table 3).

The pit groups

The material from the excavated features, with their assemblages of pottery, lithics and charred plant remains, is of the type most often termed 'domestic'. It is impossible to demonstrate positively whether or not the evidence actually represents human habitation or other (food-processing, agricultural, craft) activities. Despite the undoubted loss of some shallow cuts to the plough, the small number of features recorded from such a large area argues for intermittent, seasonal or cyclic occupation rather than for a permanent human presence.

The Norfolk Archaeological Unit's recent fieldwork on the line of the Norwich Southern Bypass provides an interesting recently-excavated comparison; a small Beaker pit group excavated at Valley Belt, Trowse (Ashwin and Bates forthcoming) contained Beaker sherds of Case's Late type, lithic pieces (including scrapers, flake knives and an adze blade) and hazel nutshell debris. Looking slightly further afield, the Longham pit clusters appear remarkably similar - in scale, distribution and artefactual content - to the Beaker pit groups excavated at Sutton Hoo (Hummler 1993).

When looking at the Longham and Bittering sites as a whole, the occurrence of such quantities of late Neolithic/Early Bronze Age material *actually within negative features* is unusual and significant in its own right. A great many of the excavated sites of this period are characterised by the occurrence of spreads of occupation material, often unstratified, and by a sparseness of features as opposed to artefacts. Good examples of Norfolk sites apparently conforming to this pattern include Reffley Wood, near Kings Lynn, Weasenham Lyngs (Healy and Petersen 1986), Bowthorpe (Lawson 1986) and Spong Hill (Healy 1988). This phenomenon is important to the study of an important issue raised by Healy, the manner in which later Neolithic occupation sites usually feature many fewer substantial pits than their 4th millennium precursors, and the way in which Beaker, Grooved Ware and Peterborough Ware are much more commonly found unstratified or conspicuously 'out-of-context' than earlier Neolithic bowl ceramics.

This temporal contrast must reflect significant - and as-yet unexplained - changes in human behaviour during the later 4th millennium, affecting both the excavation of pits and the disposal of rubbish. Good published examples of this phenomenon are provided by sites at Spong Hill (Healy 1988) and Tattershall Thorpe, Lincs (Chowne, Healy and Bradley 1993); at both of these locations, substantial earlier Neolithic features were sealed by a ploughsoil within which later Neolithic and Early Bronze Age artefacts predominated (Healy 1988, 109). Sadly no fieldwalking survey was possible at Longham due to the history of the project. If large quantities of unstratified finds did exist here then they escaped retrieval and study, due to the circumstances of the excavation and the bulk removal of topsoil by machine prior to the start of the watching brief.

The fact that pit groups of this kind are most often categorised as 'domestic' phenomena should not detract from the possibility that they, and their contents, also had ritual or ceremonial significance of some kind. Many recent studies dealing with all periods of British prehistory (*eg.* Barrett 1994, Fitzpatrick 1994, Hill 1995, Brück forthcoming) have emphasised how 'ritual' and 'mundane' activities were not necessarily mutually exclusive to Neolithic, Bronze Age or Iron Age peoples. Daily life may well have been interwoven closely and inseparably with religious or cosmological observances. The spatial ordering of sites like that at Salter's Lane - and the composition of artefact assemblages which appear as 'rubbish' to the modern eye - could have been influenced heavily by ritual and ceremonial practises and habits.

Conclusions

The results of this excavation - with the discrete and spatially separated assemblages of Middle and Late pattern Beakers which it has produced - re-emphasise the apparently strongly separate identities of these different ceramic types. This is an important observation at a time when the British Museum radiocarbon dating survey (Kinnes *et al.* 1991) has cast doubt upon the chronological validity of the Beaker typologies of Clarke, of Lanting and van der Waals and of Case. Debate on the usefulness of such ceramic typologies - and the problem of deciding what these apparent divisions within the Beaker corpus itself might actually mean - will doubtless continue (Case 1993). Laying aside problems of chronology, the apparent coherence of the Middle and Late Beaker 'complexes' at sites like Longham remains, however.

The strength of these groupings may perhaps be regarded as one facet of the body of evidence for a divided, multi-stranded society during this period. Cleal's 1984 survey of the later

Neolithic in eastern England charted the ceramic 'exclusivity' which is so noticeable on occupation sites of the period. It is certainly true that the three main ceramic styles current at this time, Grooved Ware, Peterborough Ware and Beaker, tend not to be found associated with each other within individual feature assemblages, and are usually spatially well-separated where they do coincide (*eg.* Spong Hill) on excavated sites. The pattern to be seen in East Anglia and Lincolnshire implies the existence of discrete ceramic/lithic 'systems' which, despite their apparent separation, are not territorially focussed or confined. The stylistic exclusivity seen in the Longham Beaker assemblages - those from Site 15995 as well as from the 1990 excavations - is a reminder of the fact that Beaker-users did not necessarily form a single coherent element within such a hypothetical series of 'parallel societies', and of the real possibility that some of the much-studied variability within the Beaker corpus reflects social and ideological (rather than chronological) differences.

Consideration of the excavated data as a whole (*ie.* without placing an undue interpretative emphasis on the pots alone) provides a warning of the risks inherent in too 'Beaker-centred' an approach. The Beaker and Early Bronze Age pit groups - so easily separated at an early stage of analysis on chronological grounds - are actually difficult to distinguish from each other on the basis of morphology and content once the ceramic differences between them have been removed from the equation.

General observations

The essentially 'hidden' nature of Norfolk's prehistoric settlement remains, wherever attention has not been drawn to them (often fortuitously) by cropmarks, means that located and excavated prehistoric sites other than barrows are at a premium. Given our imperfect knowledge of the location and intensity of prehistoric settlement in the county, it is most valuable that development has permitted such a large area to be examined at Longham and Bittering. The results are perhaps especially interesting in view of the site's geographical location on the Boulder Clay plateau. The problem of assessing levels of human activity in this region of central and southern Norfolk is an important issue for future research. The recording of a prehistoric sequence here, despite its slightly untypical situation on a localised inclusion of sand and gravel within the Boulder Clay proper, is a most useful addition to our knowledge.

The shifting or migratory nature of the human activity represented here must be emphasised. In the clayland environment of the central Norfolk plateau, it may be most realistic to view these comings and goings in the context of a continually shifting exploitation of temporary clearings rather than of wholesale wildwood clearance. Healy's analysis of the plain bowl and Mildenhall-type pottery from nearby Spong Hill emphasised the distinct character of each of the discrete groups of Neolithic pottery, and reinforced her conclusion that they represent discrete and temporally separated episodes of occupation (Healy 1995).

There is growing support amongst British prehistorians for the view that most Neolithic and Bronze Age human occupation was migratory to a greater or lesser degree. The various reasons for this mobility continue to be debated, and a wide range of current views and theories may be found in the papers collected in Topping 1997. The possible significance of agriculture in dictating residential shifts is obvious. Yet social factors or ritual needs may well have been as important as matters of pure subsistence in shaping peoples' habits. There are indications that mobility often took place over generational spans or cycles rather than year-by-year, and evidence for repeated occupation - perhaps indicating cyclic patterns - has been detected at sites such as Spong Hill. Recent research by Brück, using a large southern English dataset, has

emphasised the social implications of these various issues; it is possible that individual and communal identities were rooted not in specific places but in tracts of the landscape which saw continual human movement over long periods of time (Brück forthcoming).

Future research into prehistoric settlement in upland Norfolk must be sensitive to variations in soil type and drainage. The non-fluvial location of the Longham and Bittering sites, distant from rivers and lying virtually on the crown of the mid-Norfolk watershed (marked at this point by the Launditch itself), is worthy of comment. The evidence for repeated pre-Roman occupation in this type of location contrasts with - for instance - the pattern of prehistoric settlement described by Martin in eastern Suffolk, where the majority of known sites lie within 500m of running water (Martin 1993, 56-8). The question of the extent to which prehistoric peoples either utilised or avoided heavy soils before the later Iron Age (Ashwin 1996) can probably only be elucidated by a pro-active combination of desktop research and fieldwork. Rogerson's survey of the adjacent parish of Fransham (1995) offers a model for future endeavours.

The discovery of the sites at Longham and Bittering owes everything to their occurrence upon gravel subsoils, making possible their discovery during aggregate quarrying. Future fieldwork could target adjacent areas of the plateau where the more characteristic heavy Boulder Clay subsoil is present, in an attempt to discern whether or not these areas saw prehistoric occupation of a similar nature and intensity. In the absence of mineral extraction and other major disturbances to provide opportunities for funded excavation and survey work on the adjacent heavy clays, the danger of circular reasoning on this issue is an obvious one.

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BIBLIOGRAPHY

Ashwin, T.M., 1996. 'Neolithic and Bronze Age Norfolk', *Proc. Prehist. Soc.* 62, 41-62

Ashwin, T.M. and Bates, S.J., forthcoming. 'Excavations on the Norwich Southern Bypass, 1989-91. Part I: Excavations at Bixley, Caistor St Edmund and Trowse', *E. Anglian Archaeol.*

Ashwin, T.M. and Flitcroft, M.E., forthcoming. 'The Launditch and its Setting. Excavations at the Launditch, Beeston with Bittering, and Iron Age features and finds from its vicinity', *Norfolk Archaeol.*

Barrett, J.C., 1994. *Fragments from Antiquity: an archaeology of social life in Britain* (Oxford)

Bamford, H.M., 1982. 'Beaker Domestic Sites in the Fen Edge and East Anglia', *E. Anglian Archaeol.* 16

Brown, N., 1988. 'A Late Bronze Age settlement on the Boulder Clay plateau: Excavations at Broads Green 1986', *Essex Archaeol. and Hist.* 19, 1-14

Burgess, C., 1980. *The Age of Stonehenge* (London)

Burgess, C., 1986. '"Urnes of no small variety": Collared Urns reviewed', *Proc. Prehist. Soc.* 52, 339-51

Brück, J., forthcoming. 'A critical appraisal of the concepts "settlement" and "domestic" in the Early Bronze Age of southern England', in Brück, J. and Goodman, M. (eds), *People, Place and Tradition: new dimensions in settlement archaeology* (London, UCL Press)

Case, H.J., 1977. 'The Beaker Culture in Britain and Ireland', in Mercer, R.J. (ed.), *Beakers in Britain and Europe: Four Studies*, BAR Supplementary Series 26

Case, H.J., 1993. 'Beakers, deconstruction and after', *Proc. Prehist. Soc.* 59, 214-68

Chowne, P., Healy, F. and Bradley, R., 1993. 'The Excavation of a Neolithic Settlement at Tattershall Thorpe, Lincolnshire', in Bradley, R. *et. al.* 'Excavations on Redgate Hill, Hunstanton, Norfolk and at Tattershall Thorpe, Lincolnshire', *E. Anglian Archaeol.* 57, 79-117

Clark, J.D.G., 1936, 'The Timber Monument at Arminghall and its Affinities', *Proc. Prehist. Soc.* 2, 1-51

Clarke, D.L., 1970. *The Beaker Pottery of Great Britain and Ireland* (Cambridge)

Cleal, R.M.J., 1984. 'The Later Neolithic in Eastern England', in Bradley, R.J. and Gardiner, J.P. (eds), *Neolithic Studies*, BAR British Series 133 (Oxford), 135-58

Davies, J.A., 1996. 'Where Eagles Dare: The Iron Age of Norfolk', *Proc. Prehist. Soc.* 62, 63-92

Fitzpatrick, A.P., 1994. 'Outside in: the structure of an Early Iron Age House at Dunston Park, Thatcham, Berks', in Fitzpatrick, A.P. and Morris, E.L. (eds), *The Iron Age in Wessex: Recent Work*. Salisbury: Association Francaise D'Etude de L'Age du Fer/Trust for Wessex Archaeology, 68-72

Gibson, A.M., 1982. *Beaker domestic sites, a study of the domestic pottery of the late third and early second millenia BC in the British Isles*, BAR Britsh Series 107 (Oxford)

Healy, F., 1984. 'Farming and field monuments: the Neolithic in Norfolk', in Barringer, C., (ed), *Aspects of East Anglian Pre-history (20 years after Rainbird Clarke)*, 77-140 (Norwich)

Healy, F., 1988. 'The Anglo-Saxon cemetery at Spong Hill, North Elmham, part VI: occupation during the seventh - second millennia BC', *E. Anglian Archaeol.* 39

Healy, F., 1995. *Pots, pits and peat: ceramics and settlement in East Anglia*, in Kinnes, I. and Varndell, G. (eds), *Unbaked Urns of Rudely Shape: Essays on British and Irish Pottery for Ian Longworth*, Oxbow Monograph 55 (Oxford), 173-84

Healy, F., 1996. 'The Fenland Project No.11: The Wissey Embayment, Evidence for pre-Iron Age Occupation', *E. Anglian Archaeol.* 78

Healy, F., Cleal, R.M.J. and Kinnes, I.A., 1993. 'Excavations on Redgate Hill, Hunstanton, 1970 and 1971', in Bradley, R. *et. al.* 'Excavations on Redgate Hill, Hunstanton, Norfolk and at Tattershall Thorpe, Lincolnshire', *E. Anglian Archaeol.* 57, 1-80

Hill, J.D., 1995, *Ritual and Rubbish in the Iron Age of Wessex*, BAR British Series (Oxford)

Hummler, M., 1993. 'The prehistoric settlement: an interim report', *Bull. Sutton Hoo Res. Comm.* 8, 20-5

Kinnes, I.A., Gibson, A., Ambers, B., Bowman, S., Leese, M. and Boast, R., 'Radiocarbon dating and British Beakers: The British Museum programme', *Scottish Archaeol. Review* 8, 35-68

Lanting, J.N. and van der Waals, J.D., 1972. 'British Beakers as seen from the continent', *Helinium* 12, 20-46

Lawson, A.J., 1986. 'The Excavation of a Ring-ditch at Bowthorpe, Norwich, 1979', in Lawson *et al.*, 'Barrow Excavations in Norfolk, 1950-82', *E. Anglian Archaeol.* 29, 20-49

Legge, A.J., 1981. 'The Agricultural Economy', in Mercer, R., *Grimes Graves, Norfolk, Excavations 1971-2*, Vol.1, 79-103 (HMSO: London)

Longworth, I.H., 1979. 'The Neolithic and Bronze Age Pottery', in Wainwright, G.J., *Mount Pleasant, Dorset: excavations 1970-71*, Res. Rep. Comm. Soc. Antiq. London, 75-124

Longworth, I.H., 1984. *Collared Urns of the Bronze Age in Great Britain and Ireland* (Cambridge)

Margary, I.D., 1967. *Roman Roads in Britain* (London)

Martin, E.A., 1993. 'Settlement on Hilltops: Seven Prehistoric Sites in Suffolk', *E. Anglian Archaeol.* 65

Moffett, L., Robinson, M.A. and Straker, V.A., 1989. 'Cereals, fruits and nuts: Charred plant remains from Neolithic sites in England and Wales and the Neolithic economy', in Miles, A., Williams, D. and Gardner, N., *The Beginnings of Agriculture*, BAR International Series 496, 243-61 (Oxford)

Murphy, P., 1988. 'Botanical Evidence', in Healy, F., 'The Anglo-Saxon cemetery at Spong Hill, North Elmham, part VI: occupation during the seventh - second millennia BC', *E. Anglian Archaeol.* 39, 103

Murphy, P., 1991. *Longham, Norfolk. Carbonised plant remains from Beaker, Bronze Age and Iron Age contexts.* Ancient Monuments Laboratory Report 61/91, English Heritage.

Murphy, P., 1993. 'Mollusca and Plant Macrofossils', in Healy, F., Cleal, R.M.J. and Kinnes, I.A., 'Excavations on Redgate Hill, Hunstanton, 1970 and 1971', in Bradley, R. *et. al.* 'Excavations on Redgate Hill, Hunstanton, Norfolk and at Tattershall Thorpe, Lincolnshire', *E. Anglian Archaeol.* 57, 65-9

Pryor, F.M.M., 1980. *Excavations at Fengate, Peterborough, England: the third report*, Royal Ontario Museum Archaeology Monograph 6 (Toronto)

Rogerson, A., 1995. *Fransham: An Archaeological and Historical Study of a Parish on the Norfolk Boulder Clay*, unpublished PhD thesis, University of East Anglia

Topping, P. (ed.). *Neolithic Landscapes. Neolithic Studies Group Seminar Papers 2.* Oxbow Monograph 86 (Oxford)

Wade-Martins, P., 1974. 'The Linear Earthworks of West Norfolk', *Norfolk Archaeol.* XXXVI (1), 23-38

Wainwright, G.J., 1972. 'The excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk', *Proc. Prehist. Soc.* 38, 1-97

Wymer, J.J. and Healy, F., 1996. 'Neolithic and Bronze Age Activity and Settlement at Longham and Beeston with Bittering, Norfolk', in Wymer, J.J. *et. al.*, 'Barrow Excavations in Norfolk, 1984-88', *E. Anglian Archaeol.* 77

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