THE OVER NARROWS (Pt.I)

Archaeological Investigations in Hanson's Needingworth Quarry

Godwin Ridge West

Christopher Evans & Marc Vander Linden

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE

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Christopher Evans & Marc Vander Linden

With contributions by Katie Anderson, Grahame Appleby, Rachel Ballantyne, Lawrence Billington, Steve Boreham, Matt Brudenell, Natasha Dodwell, Sarah A. Farquhar, Charles French, Caroline Gregory, Colin Haselgrove, Mark Knight, Ian Riddler, Krish Seetah, Maisie Taylor and Simon Timberlake

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INTRODUCTION

EXCAVATION RESULTS

DISCUSSION

APPENDIX

In addition to outlining the 2007 excavations on the western end of the Godwin Ridge, reported herein are the results of a major programme of palaeo-environmental researches within Hanson's Needingworth Quarry on the 'Over-side' of the River Great Ouse, Cambridgeshire.

Largely evinced by intensive sampling of the ridge's buried soil, this prolific site featured a high-density Mesolithic lithic scatter and, also, yielded traces of less intense Neolithic and earlier Bronze Age usage; thereafter, the area attracted Late Bronze Age 'midden-like'/'-level' deposition. The sequence concluded in the later Iron Age, when, apart from a small farmstead enclosure, the ridge then saw an extraordinary range of ritual activity along its northern flank. Focusing upon a riverside 'midden'/platform (including dismembered horse carcasses), this involved disarticulated human remains and small votive 'packages' (e.g. variously clutches of weaving combs and brooches). This ritual activity evidently continued into the decades immediately following the Roman Conquest.

INTRODUCTION

This is the first in the Cambridge Archaeological Unit's (CAU) *Over Narrows* report series, whose investigations occurred over 2007-08 within the northeastern quarter of Hanson's Needingworth Quarry (TL 38507400; fig. 1). It outlines the results of excavations carried out by the Unit on a site located upon the western end of the 'Godwin Ridge', which had first been recognised during English Heritage's Fenland Survey (Hall 1996) and later investigated during an evaluation undertaken by the CAU in 2001 (Site 13; Evans & Webley 2003).

So-entitled by the Unit, *The Godwin Ridge* (in homage to Harry Godwin, the renowned Cambridge/Fenland ecologist), this sand ridge directly beds upon the basal gravels and forms a marked quasi-linear landscape feature in the Ouse floodplain (fig. 2). The excavations demonstrated the presence of one of the most significant Mesolithic flint scatters yet known within the region, as well as (in addition to intensive Late Bronze Age usage) a Late Iron Age 'farmstead' and riverside ritual complex. As will become apparent, this was not really a matter of feature-based archaeology. The site generated more than 40,000 artefacts, with most of its data deriving from the intensive sampling of its buried soil horizons; accordingly, matters of sample-methodology are highlighted within this report.

Topography and Geology

The Godwin Ridge runs on a roughly southwest-northeast axis and extends for approximately 1400m to the northeastern limits of the quarry, adjacent to Earith and where the present-day river debouches into the Fens (Vander Linden & Evans 2008). The ridge is well-preserved, raising *c*. 1.4-3m (OD) above the Ouse floodplain, and is between 60 and 150m wide (fig. 3). It does not, though, constitute a continuous landmass and a minor palaeochannel bisects it into two roughly equal parts (see fig. 2, Channel IX); therefore, the ridge is better described as two 'elongated islands'. The western length stretches for some 550m, with its width varying between 60 and 70m; the current area corresponds to the extreme western end of this first 'long island'.

This Late Glacial feature has a complex and composite internal stratigraphy, comprising a basal silt (occasionally associated with gravely clay) overlain by sand and sandy clay. Indeed, its geological formation is not straightforward and it was initially thought to be some manner of roddon (see Boreham in Evans & Webley 2003); only later was it realised that it was an original upstanding feature of the glacial braidplain that had subsequently been carved-out by later palaeochannels into its 'linearity'.

The ridge is bordered on each side by palaeochannels related to the activity of the Ouse delta (see Boreham below): to the west, a main palaeochannel of the Ouse River (fig. 2; Channel I) and, to the north and south, smaller channels (respectively Channels V & VII); the latter separating the Godwin Ridge from another 'matching' sand ridge formation, the southern, O'Connell Ridge.

Corresponding to the western end of the Godwin Ridge, the current site was opened across an area 70m long, with its width varying between 60m and 100m (fig. 4). The western extremity of the ridge is about 80m wide and it narrows progressively towards the east, where it is some 50m wide. This part of the ridge is also the highest, as it there raises to *c*. 3m OD. This is a minimal estimation of its true form, as the ridge has been flattened and eroded by recent ploughing (see Evans & Webley 2003 concerning is gridded, ploughsoil-fieldwalking collection). Therefore, the yellow orange sand, which constitutes the bulk of the ridge, lies immediately beneath the topsoil for a width of 10-25m wide (50m long) along its crest and, across this swathe, the sandy clay buried soil has been ploughed-off (see below). The ridge's northern and western slopes are relatively steep (1m in 10m gradient), while the southern is more moderate (1m gradient over 30-40m). The northern and western slopes were locally blanketed with a narrow band of buried soil (1-2m wide, 5-10cm thick) and, then, a broader swathe of waterwashed sands (5-7m wide, 5-30cm thick), which corresponds to the riverine washing/churning of the ridge's flanks. Over a 20-25m wide swathe the southern slope saw a thick buried soil cover (up to 60cm deep). Beyond this, the slope gently flattens and was covered by an intricate mix of buried soil and alluvium relating to the action of the palaeochannel separating the Godwin and O'Connell Ridges (Channel VII).

The Buried Soil

Following machining-stripping of the site down to the buried soil and, otherwise, the top of the ridge's sands (see fig. 6 for the area of palaeosol survival), following the collection of surface finds, phosphate samples were then taken from this horizon and the ridge was subject to magnetic susceptibility survey. With readings taken on a 1.00m interval, the latter was undertaken (by A. Challands) across the 1300sqm of the ridge's top. This indicated a distinctly 'high reading' zone extending northeast-southwest along its crown/spine (fig. 18). This quasi-linear swathe was, accordingly, one of 'targets' for the ensuring intensive test pit-sampling. The results, however, proved negative; the 'high'-area having no artefact-distributional register and, upon stripping of the buried soil, it had no feature-related correlates.

Samples were obtained from the buried soil, control stations and 'A'- and 'B'-horizons as part of a large-scale survey of the length Goodwin Ridge to assess phosphate levels. With many hundreds of samples taken (on 5/10.00m grid), initially, 71, distributed along the length of the ridge, were analysed on a trial basis; 10 of these being from 2007 fieldwork area (the full report and analysis by Dr J. Crowther, Lampeter University, will be presented in the forthcoming 2008 Godwin Ridge fieldwork report; *'Narrows* Pt. II). The 10 trial samples processed from the 2007 programme were obtained from those parts of the site subject to test pitting, control stations and along the baulk-edge. Unfortunately, the strong natural variability and the nature of the substrate prevented any meaningful conclusions to be made from the results.

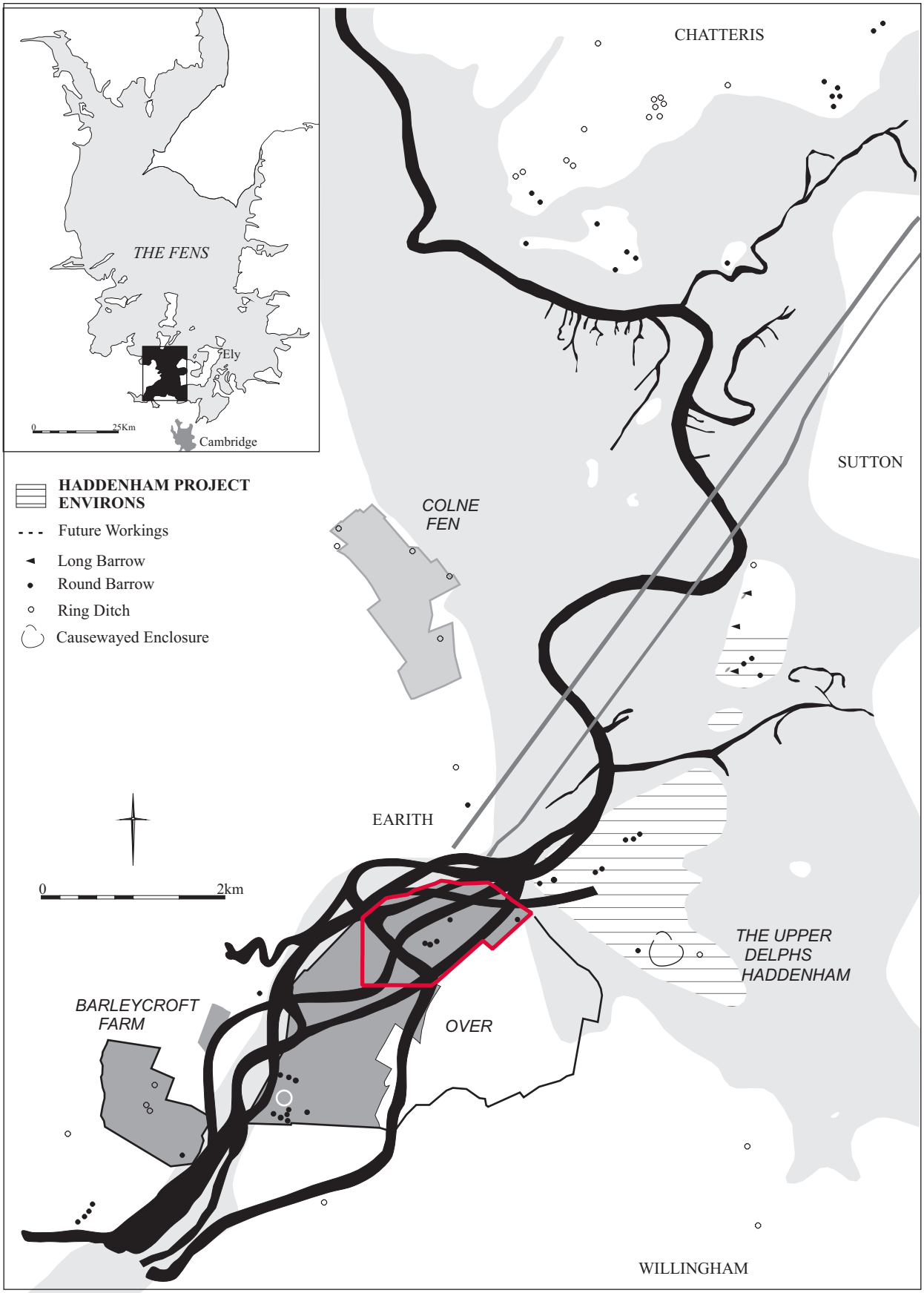
THE FENS
Ely
0
25Km
Cambridge
HADDENHAM PROJECT ENVIRONS
Future Workings
Long Barrow
Round Barrow
Ring Ditch
Causewayed Enclosure
CHATTERIS
SUTTON
COLNE FEN
EARITH
0
2km
THE UPPER DELPHS HADDENHAM
BARLEYCROFT FARM
OVER
WILLINGHAM
34/70
44/70

Figure 1.

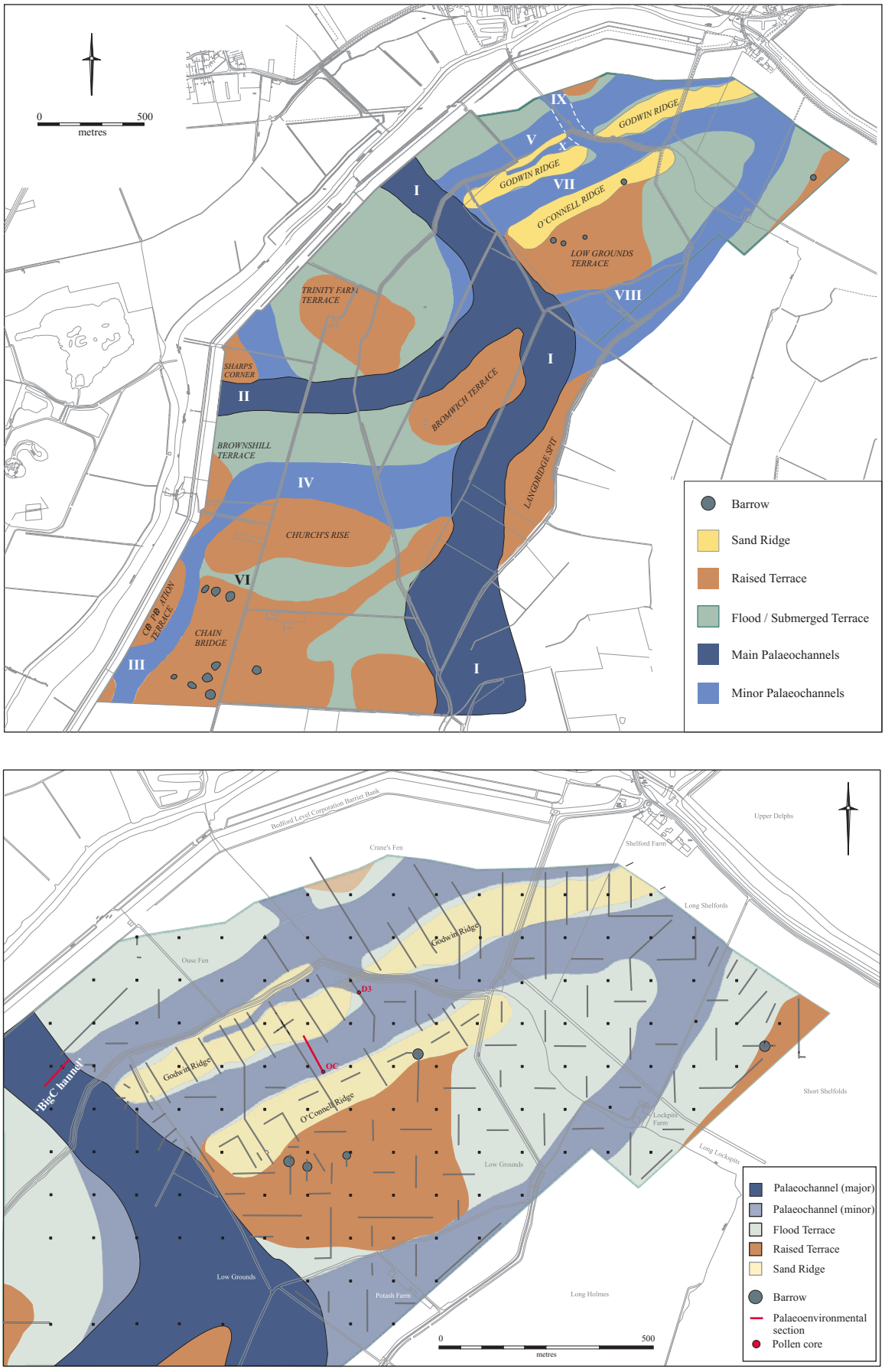
0
500
metres
IX
V
X
GODWIN RIDGE
VII
O'CONNELL RIDGE
LOW GROUNDS TERRACE
VIII
I
TRINITY FARM TERRACE
SHARPS CORNER
II
BROMWICH TERRACE
BROWNSHILL TERRACE
IV
CHURCH'S RISE
LANGDRIDGE SPIT
VI
CHAIN BRIDGE
III
Barrow
Sand Ridge
Raised Terrace
Flood / Submerged Terrace
Main Palaeochannels
Minor Palaeochannels
Bedford Leyel Corporation Barrier Bank
Crane's Fen
Upper Delphs
Shelford Farm
Long Shelfords
Ouse Fen
Godwin Ridge
D3
OC
'BigC' hannel
O'Connell Ridge
Short Shelfolds
Lockpits Farm
Long Lockspits
Low Grounds
Potash Farm
Long Holmes
Palaeochannel (major)
Palaeochannel (minor)
Flood Terrace
Raised Terrace
Sand Ridge
Barrow
Palaeoenvironmental section
Pollen core

Figure 2.

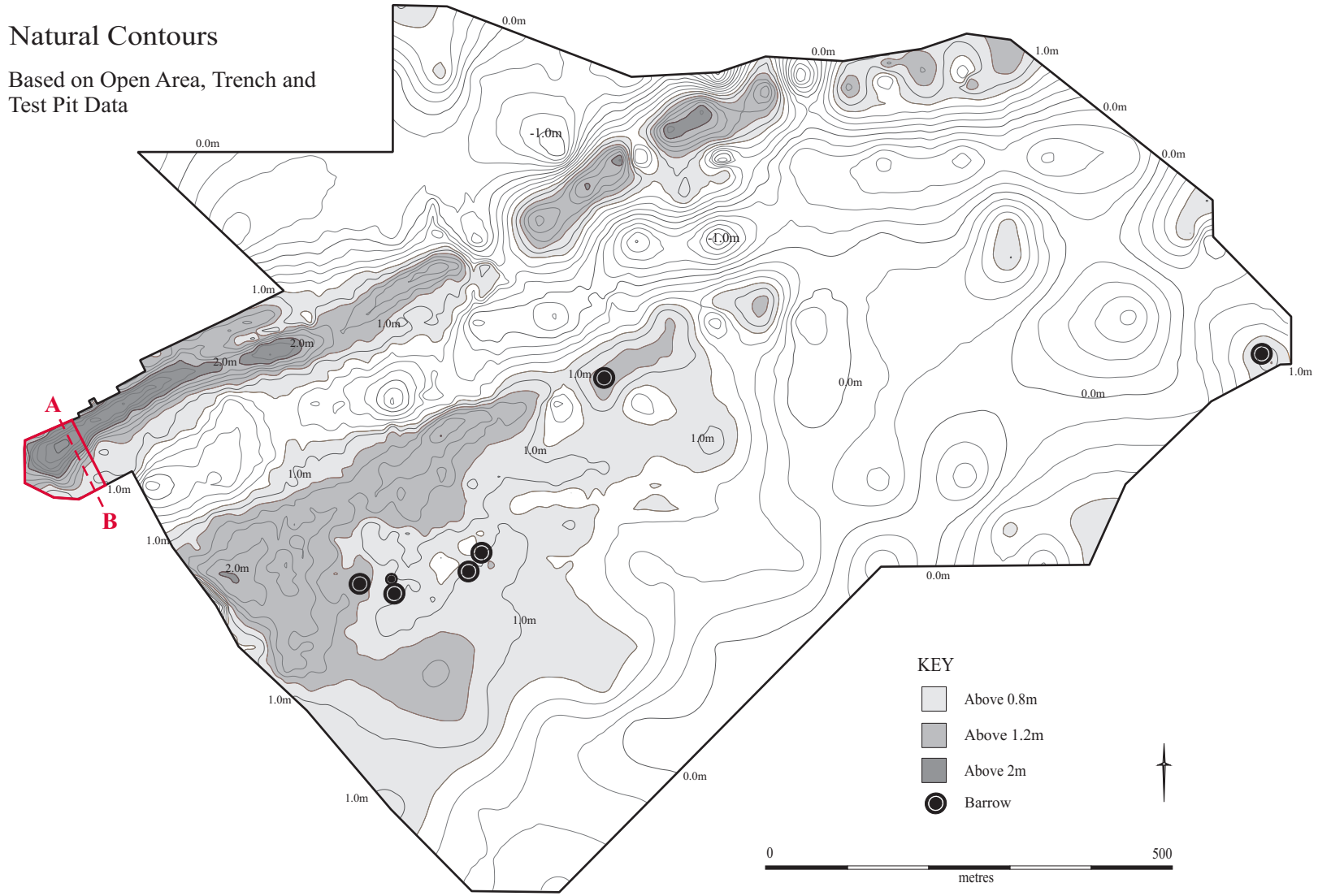
Natural Contours
Based on Open Area, Trench and Test Pit Data
A
B
KEY
Above 0.8m
Above 1.2m
Above 2m
Barrow
0
500
metres

Figure 3.

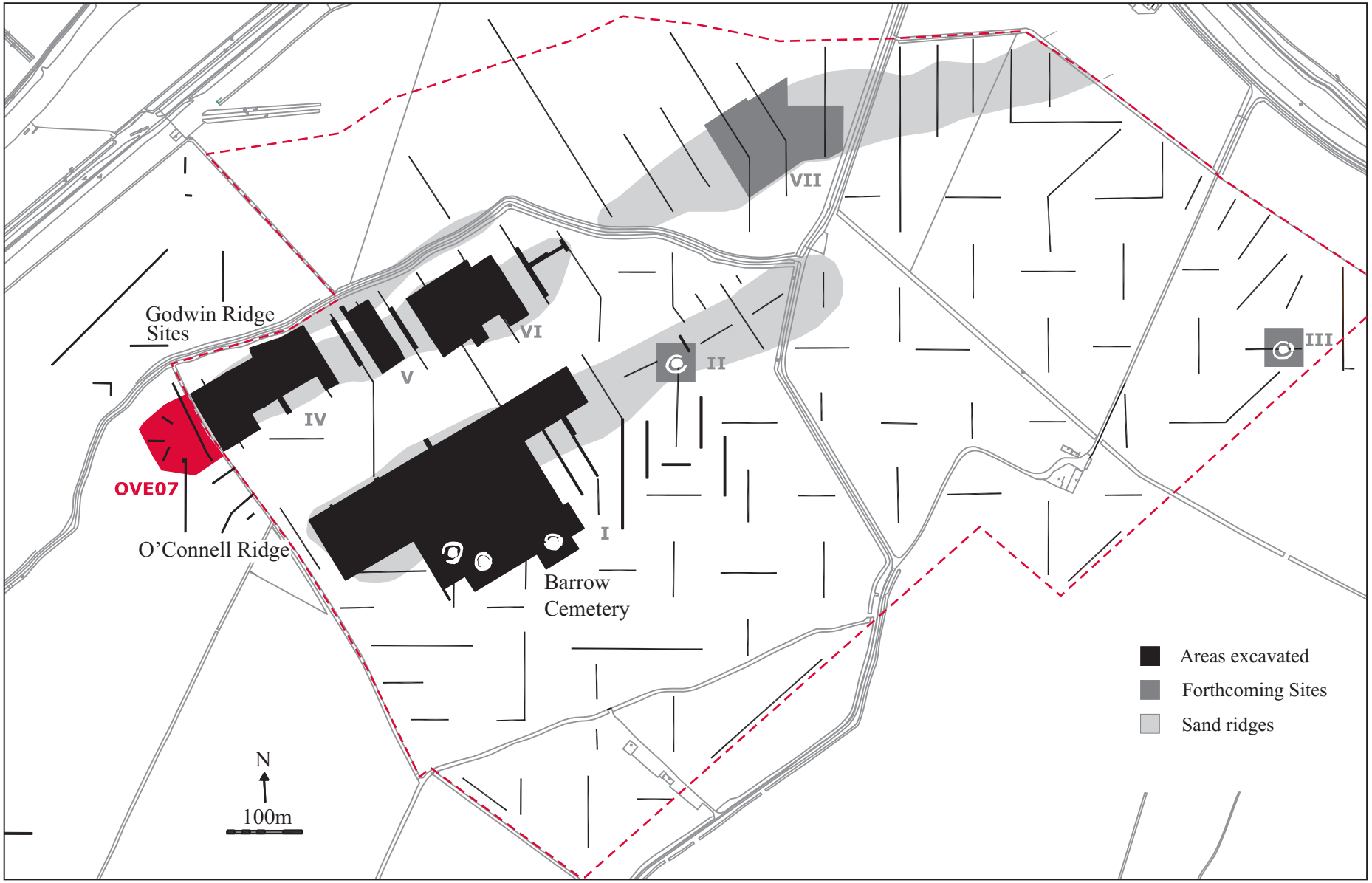
Godwin Ridge
Sites
VII
VI
V
IV
II
III
I
OVE07
O'Connell Ridge
Barrow
Cemetery
N
100m
Areas excavated
Forthcoming Sites
Sand ridges

Figure 4.

The buried soil was, thereafter, sample-excavated (by the implementation of 'tiered' methodology/intensity) which, in total, involved the hand-excavation of, in total, 304 metre-square test pits (fig. 7). Similarly, the ridge's flanking waterwashed sandy layers were test-excavated *via*. 80 metre-test pits (arranged singularly and in transects), and with larger area-swathes also hand-dug (see fig. 17). The site's sampling regime will be further detailed below (see *Excavation Results*); mention should now, though, be made that while within this report more fulsome review will be made of the buried soils artefact distributions, this will not a comprehensive 'final word'. The site (and with it its finds distributions) clearly extended eastwards beyond the line of the dyke on that side and, accordingly, its finds patterning will only be 'complete' once the two site's results are incorporated ('*Narrows* Pt .II).

At this juncture, however, it is worth outlining the degree to which the sandy character of ridge's buried soil and, also, its immediate topography appear to have contributed to a degree of artefact residuality and depositional reworking. On the one hand, there seems to have been some 'colluvial' movement and the much greater depth of buried soil along the ridge's gentler southern flanks must reflect its weathering 'displacement' from off of its crown; with the sand-lensed deposits along its steeper northern and western sides reflecting churning through water action (both washing by the river and by rainfall from off of its crown). Yet, there is no direct evidence of any substantive movement of finds; any complete off-site/-ridge loss cannot, of course, be adjudicated, but its artefact distributions do seem to have maintained a basic spatial integrity/coherence.

Where, on the other hand, a degree of displacement appears to have occurred is in the vertical dimension, and Iron Age material seems to have moved downwards. On most sites within the region where such sub-soils survive, Iron Age and Roman features cut through these layers; as, indeed, a Late Iron Age roundhouse and its enclosure did here. Consequentially, associated surface finds tend to be confined to strata preserved upon these horizons (e.g. banks or house floors) and not occur within them, as such. In this case, however, Middle/later Iron Age material seems to have been incorporated into the buried soil and possibly also the top of earlier features cutting it (the ridge-top pitting cluster; see below).

The loose sandy character of the site's buried soil may well have been responsible for this. As was clearly demonstrated during the excavations themselves, subject to wind-blow/-loss, this would have deflated the soil's profile, leaving artefacts to 'drop' downwards in/onto the surviving/truncated top of the buried soil and, in effect, have incorporated later material into it. As is apparent in Figure 8's characteristic photograph of the top of this horizon, quite unusually its surface was strewn with finds and which is not at all typical of buried soil horizons; wind-blow deflation (and subsequent water/rain action) would seem the most likely mechanism responsible.

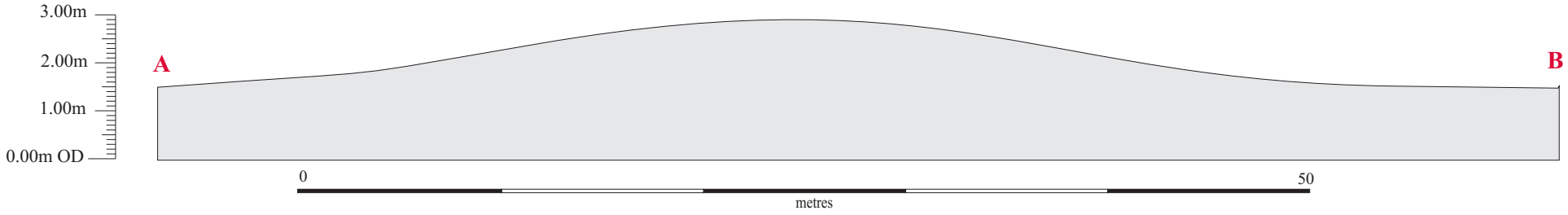

Figure 5.

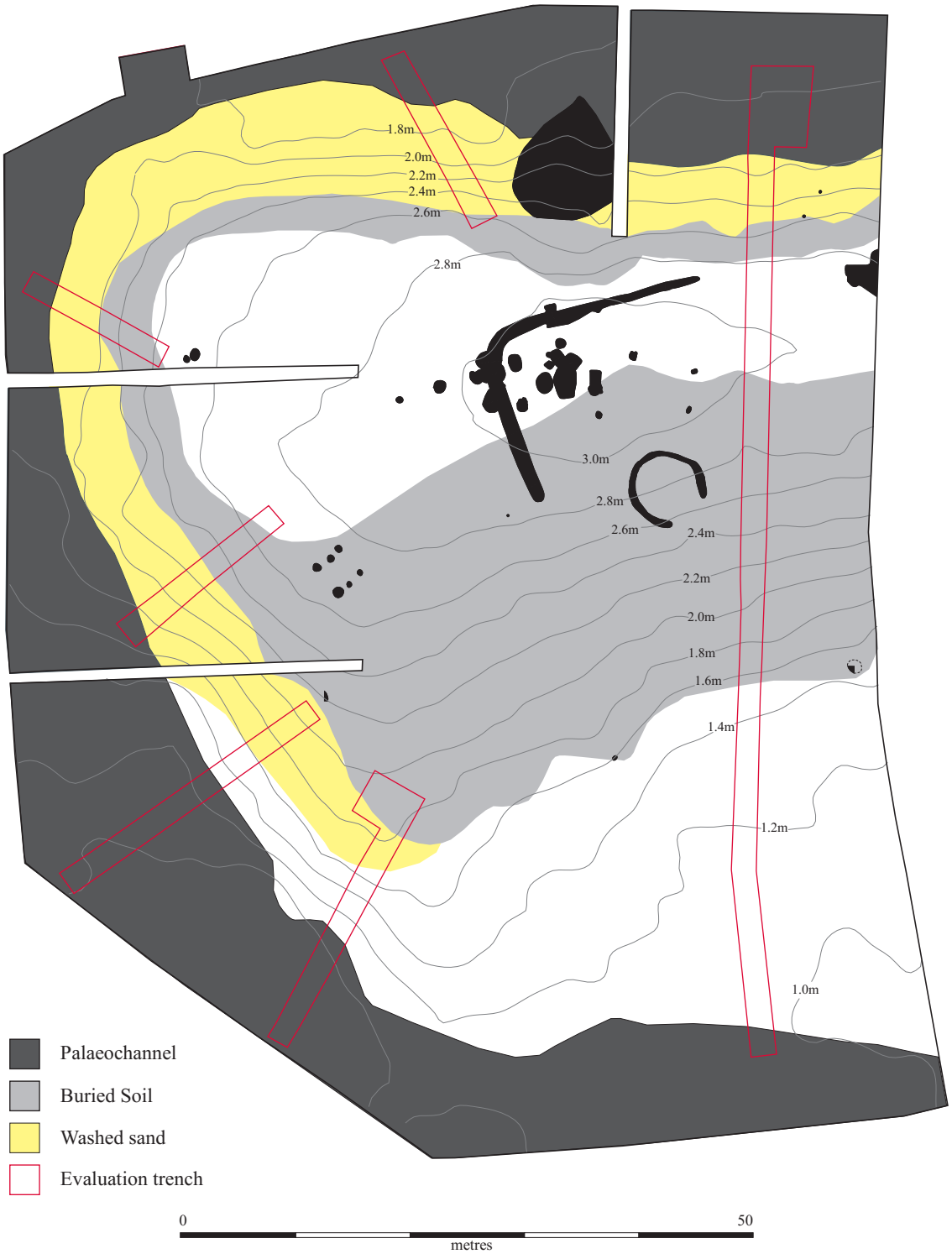
1.8m
2.0m
2.2m
2.4m
2.6m
2.8m
3.0m
2.8m
2.6m
2.4m
2.2m
2.0m
1.8m
1.6m
1.4m
1.2m
1.0m
Palaeochannel
Buried Soil
Washed sand
Evaluation trench
0
50
metres

Figure 6.

Figure 7.

Figure 8.

Geoarchaeological Assessment Charles French

Excavations over the past two years have afforded the opportunity to excavate and sample large expanses of buried soil and old land surface with 'The Narrows' environs investigations: the 'Godwin Ridge' (associated with Mesolithic and Bronze Age settlement features and material remains), the 'O'Connell Ridge to the south and, also, with the barrow group situated on southern terrace-side of the latter. This statement is, however, only concerned with the northern, Godwin Ridge and, then, as a whole (i.e. also the 2008 area of excavation and not just the western end).

A well developed, fine sandy loam palaeosol with two evident horizons is ubiquitous across the Godwin Ridge. It ranges in thickness from *c*. 10 to 90cm; thinning dramatically on the northern slope and margin with the palaeochannel (c. 10-15cm), as well as along the very centre of the ridge (c. 15-25cm). The two horizons consist of an upper, dark greyish brown to black sandy organic loam or Ah horizon which is up to 30cm in thickness. This horizon tends to become blacker and deeper where it is associated with denser artefact assemblages; it is all but absent along the margin with the palaeo-channel along the north side of the ridge, and is somewhat truncated in a linear swathe about 10m wide along the central axis of the ridge. The lower horizon is a yellowish brown to yellowish white sand with variable amounts of amorphous iron mottling and staining, and much evidence of earthworm casts. Thus this soil has been much affected by a locally rising and falling groundwater table and much bioturbation by the soil fauna.

Although this soil has yet to be analysed in thin section, its horizon characteristics suggest that it was a brown earth that had developed under woodland in the earlier Holocene and has subsequently become prone to a rising groundwater table and disturbed by human activities and erosion processes. In particular, human activities appear to have resulted in the thickening and blackening of the organic A horizon. Essentially this may seen as middening activity which varies spatially across the ridge in its intensity and its degree of survival. The midden material is composed of very fine charcoal, humified organic matter and pottery/flint/animal bone settlement-related debris. Secondly, there has been much groundwater fluctuation in the past leading to ubiquitous mottling with amorphous iron oxides.

There are a number of taphonomic factors affecting the survival of this palaeosol. The central c. 10metre width of the ridge is just within modern plough depth, so there is some truncation of its upper surface. It is also probable that this former A horizon surface suffered physical disturbance, freshwater flooding, wind-blow and deflation prior to burial by peat, probably in post-Roman times. Along the lower margins of the ridge, and especially on the northern side of the ridge, and in some larger feature fills on the ridge itself, fine-medium sand deposition alternates with lenses of sandy loam soil and/or humified organic matter, mainly 1-2cm thick. These lenses may be both horizontal and convoluted in orientation. The implication of these features is that this surface must have been periodically devoid of vegetation, at other times influenced by water- and wind-borne sediments, perhaps derived from the edges of the channel, as well as intermittent periods of more marshy, standing water with organic accumulation, and some times there was sufficient stability for incipient soil formation to commence. This would suggest that this ridge and channel was an open and aggrading system, receiving fine-medium sand from the exposure and reworking of the upper edges of the palaeochannel when the water level was lower, probably on a seasonal basis, but also intermittently being sufficiently stable for organic accumulation and/or soil development. As a corollary, there were also periods of truncation, removal and re-deposition, probably all on a localised scale on/off the ridge.

Palaeo-Environmental Investigations

This section essentially consists of two main parts. First, Boreham below reviews the original area-wide evaluation-based geological/palaeo-environmental study (in Evans & Vander Linden 2008) in the light of the radiocarbon dates that have since been achieved for its sequences. (Note, as opposed to the main channels that were recognised in the course of the 2007 in-field trench investigations proper, as shown on Figure 2, the line of Channel IX - breeching the Godwin Ridge - and Channel X were only subsequently identified; laterally bisecting that ridge's sands, and probably flowing 'upstream' from the Fens, the latter was only exposed during the 2008 excavations. Not, therefore, discussed in the text that follows, the key here being that such relatively small channels occur below the resolution of the original evaluation test pit- and trial trench-derived data.)

Second, Boreham and his colleagues thereafter present their analyses of the 'Big Channel' (i.e. main Ouse palaeo-channel). This is based on a quarry-exposed section that occurred while excavation were on-going during 2008. The aim of its inclusion is to augment and further detail the original 2007 evaluation-based studies. It is one of three environmental sections that were investigated during the excavation-phase and which will be duly reported upon in the Over Narrows series according to which area/part they hold the greatest relevance (Channel IX, pt. II; Channel VII, pt. III: see fig. 2).

Geological and Stratigraphic Analyses of Sediments and Radiocarbon Dating Results Steve Boreham BSc. PhD

This report presents the results of stratigraphic analyses from 102 trial pit excavations and six sections investigated and sampled for environmental analyses at Low Grounds, Lockpits Farm and Crane Fen at Over. It also presents the results radiocarbon dating from these six key sections (A-F), located in three main channels (V, VII & VIII; see fig. 2). Figure 9 shows the locations of the trial pit excavations at the site carried out as part of the 2007 assessment survey. Eleven west-east geological cross-sections (WE0 – WE100) have been constructed from the trial pit data. These sections appear in Figures 2 and 3, with the locations of the six environmental sections (A-F) shown in Figure 9; the stratigraphy and sampling of the environmental sections follows, with the tabulated radiocarbon results appearing in Table 1.

Geological Sections

Figures 10 and 11 present eleven west-east geological cross-sections across the site. Note that whilst these sections are to scale, elevation data for was not available. Therefore the sections have been 'hung' below a surface datum in this interim report, whereas in fact surface topography plays an important role in the interpretation of the geological features. Despite this drawback, the stratigraphy and three-dimensional architecture of the sediment can be plainly seen. It is immediately apparent that the basal gravel is rather variable in height across the survey area, exhibiting ridges and channels. The basal gravel unit is interpreted as braidplain sediment of last glacial (Devensian) age.

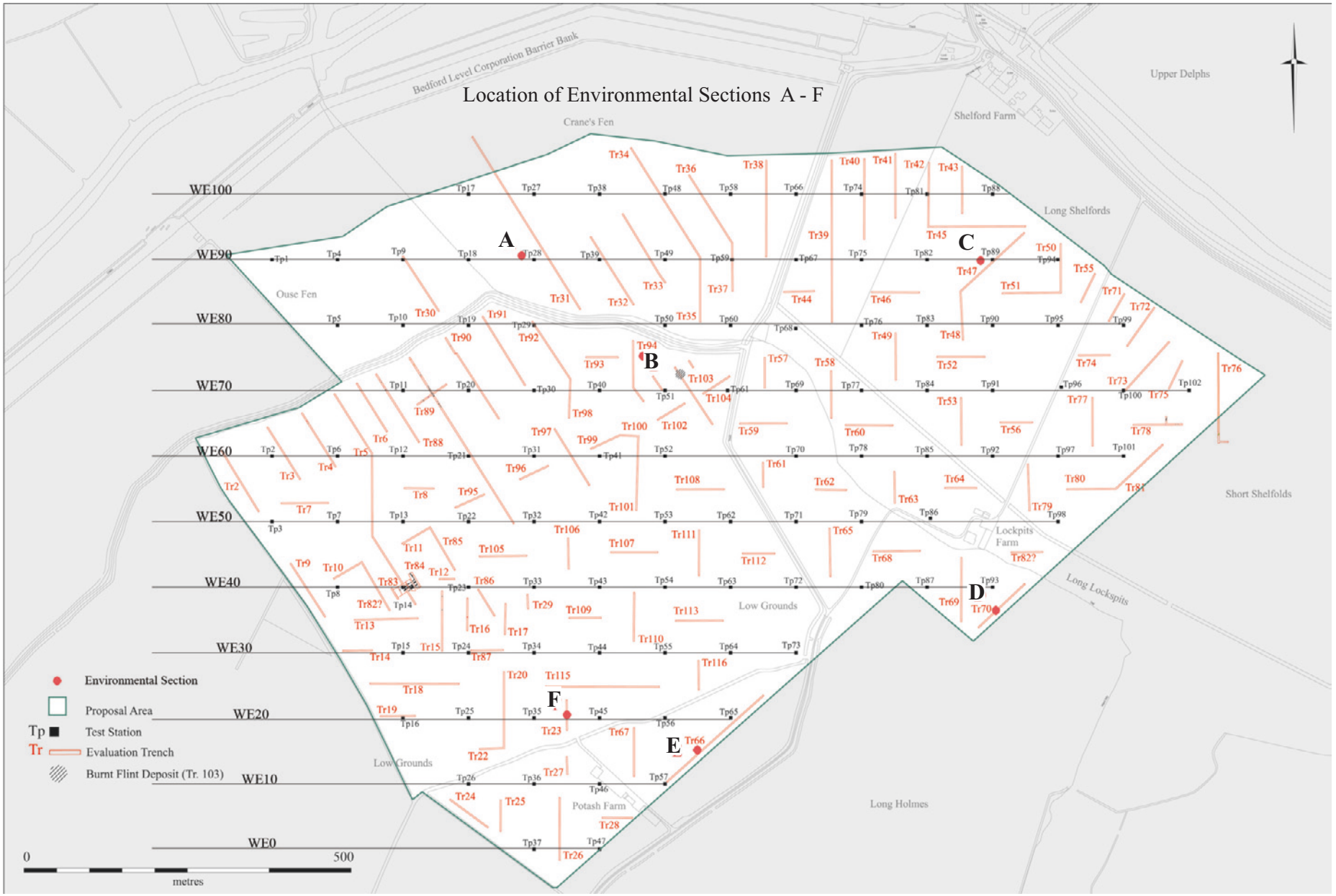
Location of Environmental Sections A - F
Bedford Level Corporation Barrier Bank
Crane's Fen
Upper Delphs
Shelford Farm
Long Shelfords
Ouse Fen
Short Shelfolds
Lockpits Farm
Long Lockspits
Low Grounds
Potash Farm
Long Holmes
WE100
WE90
WE80
WE70
WE60
WE50
WE40
WE30
WE20
WE10
WE0
A
B
C
D
E
F
Environmental Section
Proposal Area
Tp Test Station
Tr Evaluation Trench
Burnt Flint Deposit (Tr. 103)
0
500
metres

Figure 9.

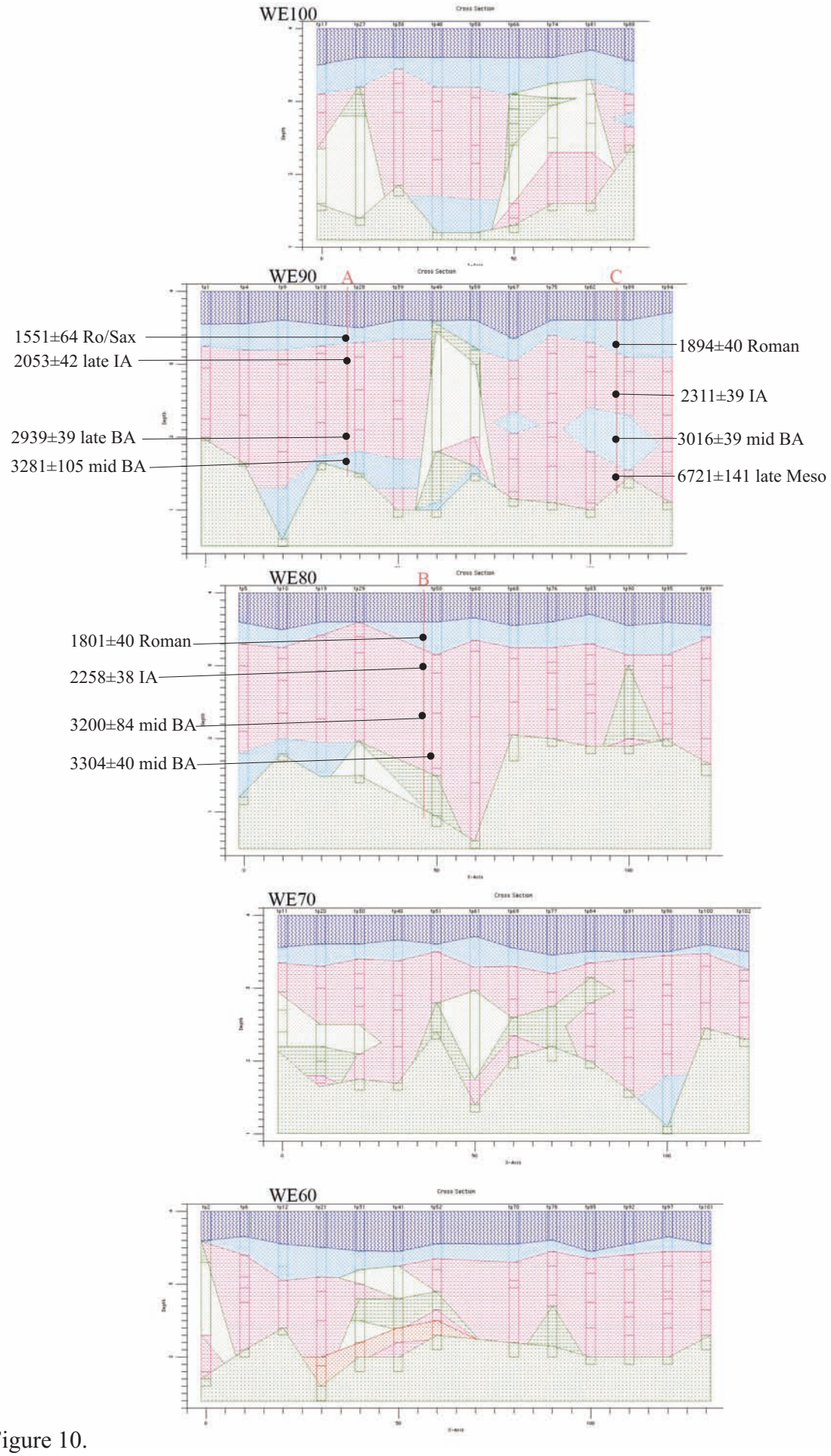
WE100
WE90
A
C
1551±64 Ro/Sax
2053±42 late IA
2939±39 late BA
3281±105 mid BA
1894±40 Roman
2311±39 IA
3016±39 mid BA
6721±141 late Meso
WE80
B
1801±40 Roman
2258±38 IA
3200±84 mid BA
3304±40 mid BA
WE70
WE60

Figure 10.

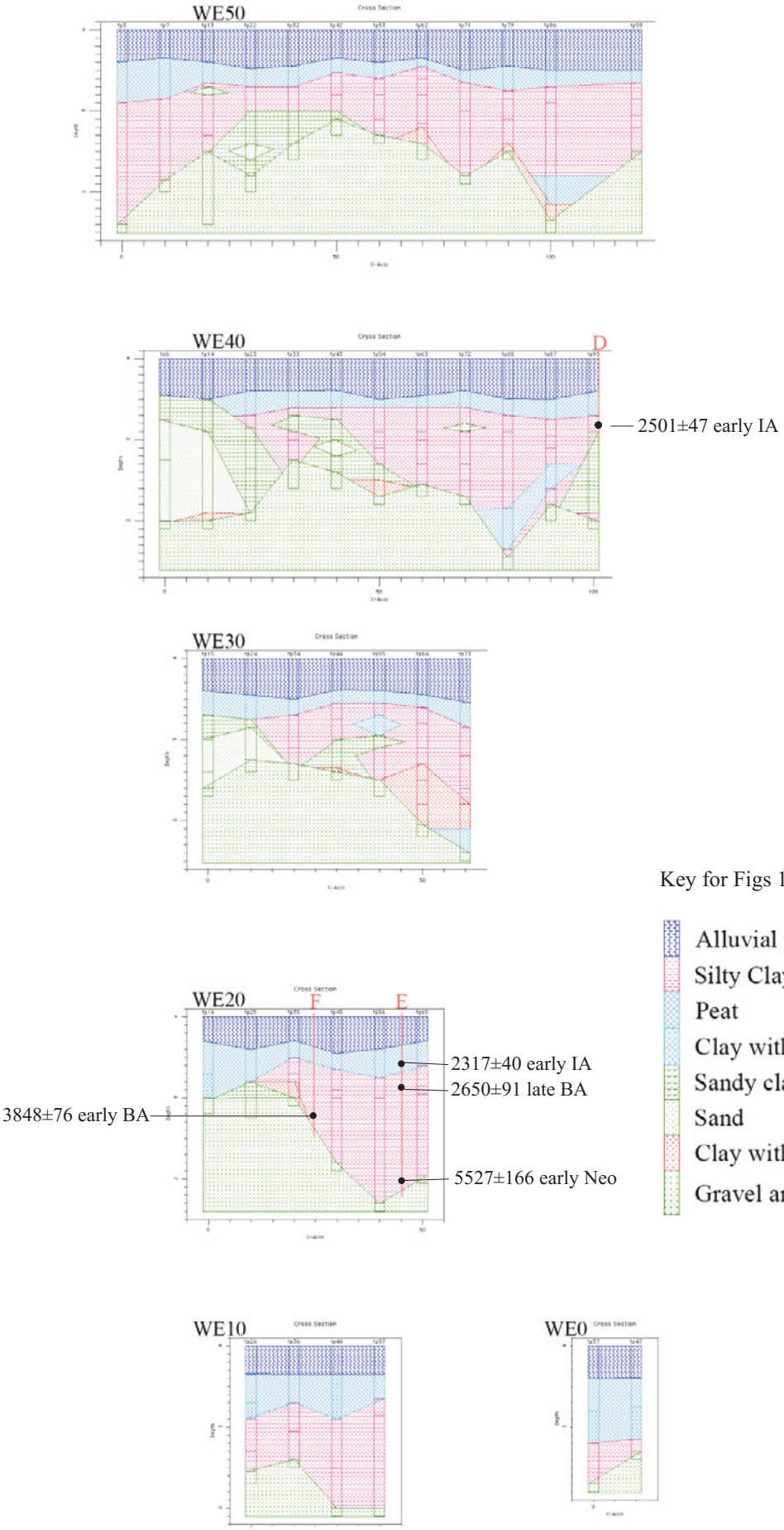
WE50
WE40
D
2501±47 early IA
WE30
WE20
F
E
2317±40 early IA
2650±91 late BA
3848±76 early BA
5527±166 early Neo
WE10
WE0
Key for Figs 10 and 11
Alluvial ploughsoil
Silty Clay
Peat
Clay with peat
Sandy clay
Sand
Clay with gravel
Gravel and sand

Figure 11.

Resting directly on the basal gravel are 'sand' ridges that form visible landscape features on the site. The ridges have a complex and composite internal stratigraphy often comprising a basal silt, occasionally associated with gravelly clay, and overlain by a ridge of sand and sandy clay. Buried sandy clay soils are often associated with the higher parts of the ridges, and sandy material frequently forms wedges and lenses where it has washed off the ridge tops into the surrounding sediment. The 'sand' ridges are interpreted as Late Glacial fluvial sediments, once deposited as a continuous sheet across the gravel braidplain surface, and subsequently eroded by floodwaters to form elongate landforms. The organic silt within one of the ridges has been radiocarbon dated to the Late Glacial period.

Between the ridges, a thin basal peat unit is often present directly overlying the basal gravel, or associated with a thin basal silt unit. Bog oaks and wood were frequently described from this peat. The oldest basal peats and associated silts have been dated to the Late Mesolithic in Section C (6721±141 BP) and the early Neolithic (5527±166) in Section E. These represent the accumulation of organic material from wet woodland and freshwater fen environments. However, in several locations, peats and associated silts at the base of the sequences have been dated to the early Bronze Age (Section F – 3848±76 BP) and mid Bronze Age (Section C – 3016±39 BP, Section B – 3304±40, 3200±84 & Section A – 3281±105). These units are interpreted as representing fluvial and possibly estuarine and inter-tidal marine early-mid Bronze Age deposits analogous to the Barroway Drove Beds that extend across much of southern Fenland. However, the survey area is at the extreme southern edge of the area known to have been inundated by the Bronze Age marine transgression at 3400 BP. Whilst it is possible that the peats represent saltmarsh, and the silty clays represent mudflat deposition, evidence from the 'Big Channel' section (OVE08 BC – Channel I) suggests that truly marine conditions may have been confined to deeper channels, except in extreme circumstances, such as storm surges. In contrast, the basal silts in Channel V appear to be late Bronze Age in date (2939±39 – Section A).

A silty clay unit, which in places reaches in excess of 2m in thickness, fills up the channels between the 'sand' ridges, and in some places extends above them. There are occasional lenses of peat and gravel within the silty clay unit. In Channel VIII, the upper part of this infilling dates to the late Bronze Age (2650±91 – Section E) and early Iron Age (2501±47 – Section D). To the north in Channel VII the upper sediments date to the mid Iron Age (2311±39 – Section C; 2258±38 – Section B) and in Channel V the last silts were deposited in the late Iron Age (2052±42 – Section A).

The silty clay unit contains freshwater shells indicating a fluvial environment, and the gravel lenses seem to be small channels that temporarily cut into the muddy surface. There is evidence from the onset of peat accumulation that Channel VIII was abandoned in the early Iron Age (2317±40 – Section E) whilst Channel V remained active until the late Iron Age (Section A). The upper peat unit therefore appears to be a diachronous (time transgressive) unit which began to form locally in the Iron Age and spread across the whole area in the Roman (1894±40 – Section C; 1801±40 – Section B) and later periods (1551±64 – Section A).

It seems that whilst all the channels were apparently active in the early Bronze Age, Channel VIII silted up first, followed by Channel VII and finally Channel V. The alluvium that covers the whole site (the 'Romano-British Silt') is thought to represent over-bank flood deposits of the River Great Ouse from Roman through to Medieval times.

Sample Code		**Height** (cm)	**Wk**	**dC13**			**% Modern**			**Result**			
Section	Trench												
A	T32	225-235*	22860	-28.8	+/-	0.2	66.5	+/-	0.9	3281	+/-	105	BP
A	T32	170-180*	22859	-29.3	+/-	0.2	69.4	+/-	0.3	2939	+/-	39	BP
A	T32	75-80*	22858	-30.3	+/-	0.2	77.4	+/-	0.4	2053	+/-	42	BP
A	T32	40-50*	22857	-31	+/-	0.2	82.4	+/-	0.7	1551	+/-	64	BP
B	T94	40-50	22861	-28.6	+/-	0.2	66.3	+/-	0.3	3304	+/-	40	BP
B	T94	70-80	22862	-30.9	+/-	0.2	67.1	+/-	0.7	3200	+/-	84	BP
B	T94	140-150	22863	-29.4	+/-	0.2	75.5	+/-	0.4	2258	+/-	38	BP
B	T94	170-180	22864	-29.7	+/-	0.2	79.8	+/-	0.4	1810	+/-	40	BP
C	TS89	10-20	22848	-28.0	+/-	0.2	43.3	+/-	0.8	6721	+/-	141	BP
C	TS89	65-75	22849	-29.5	+/-	0.2	68.7	+/-	0.3	3016	+/-	39	BP
C	TS89	132-142	22850	-30.6	+/-	0.2	75.0	+/-	0.4	2311	+/-	39	BP
C	TS89	162-172	22851	-30.5	+/-	0.2	79.0	+/-	0.4	1894	+/-	40	BP
D	T70	35-45	22852	-29.7	+/-	0.2	73.2	+/-	0.4	2501	+/-	47	BP
E	T66	45-50	22853	-29.4	+/-	0.2	50.3	+/-	1.0	5527	+/-	166	BP
E	T66	115-120	22854	-32.5	+/-	0.2	71.9	+/-	0.8	2650	+/-	91	BP
E	T66	145-150	22855	-29.8	+/-	0.2	74.9	+/-	0.4	2317	+/-	40	BP
F	T23	25-30	22856	-29.6	+/-	0.2	61.9	+/-	0.6	3848	+/-	76	BP

Table 1: Radiocarbon Dating (* NB: all sequences were measured bottom-up apart from A, which was partly from a borehole and measured top-down).

Sediment Thickness and Distribution

Figure 12 shows sediment thickness (isopach contours) above the basal gravel unit across the site. To the south of the survey area there is a ridge of gravel that rises up close to the ground surface that results in overlying sediment thicknesses of between 1 and 1.5m. To the north of the site there are several deeper areas where the sediment thickness exceeds 3m.

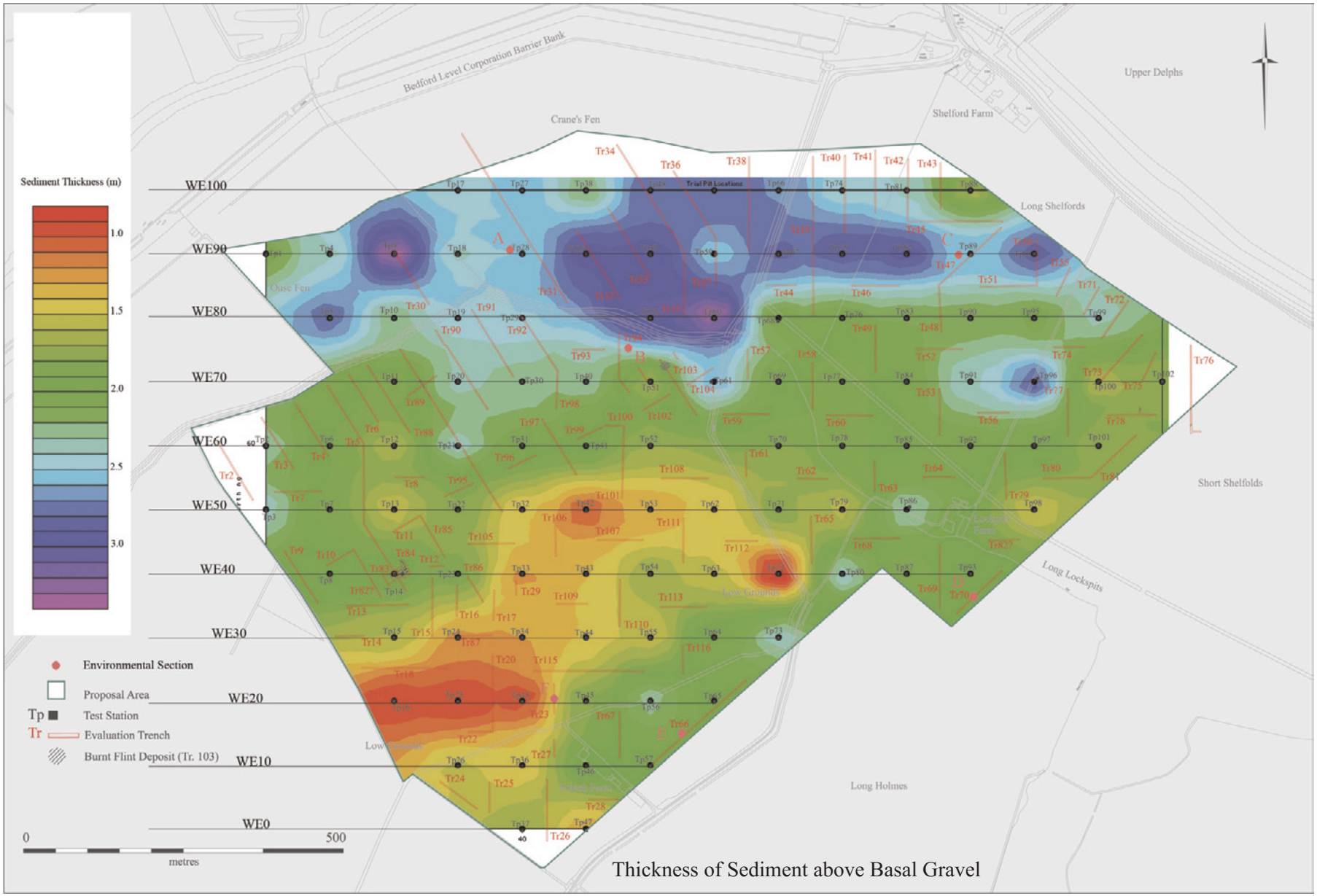
Sediment Thickness (m)
1.0
1.5
2.0
2.5
3.0
WE100
WE90
WE80
WE70
WE60
WE50
WE40
WE30
WE20
WE10
WE0
Environmental Section
Proposal Area
Tp Test Station
Tr Evaluation Trench
Burnt Flint Deposit (Tr. 103)
0
500
metres
Bedford Level Corporation Barrier Bank
Crane's Fen
Upper Delphs
Shelford Farm
Long Shelfords
Ouse Fen
Short Shelfolds
Long Lockspits
Long Holmes
Low Ground
Thickness of Sediment above Basal Gravel

Figure 12.

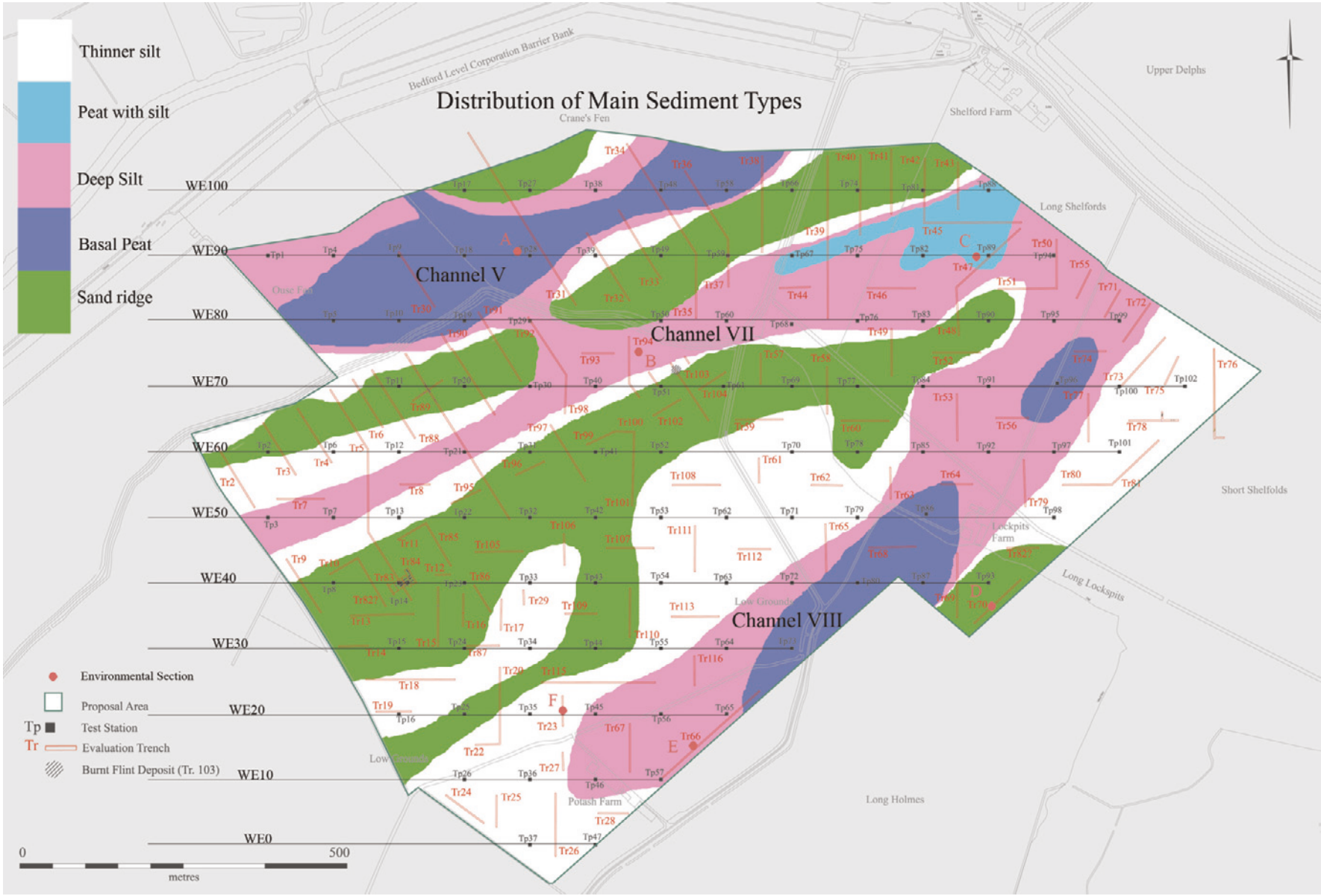
Distribution of Main Sediment Types
Thinner silt
Peat with silt
Deep Silt
Basal Peat
Sand ridge
Channel V
Channel VII
Channel VIII
WE100
WE90
WE80
WE70
WE60
WE50
WE40
WE30
WE20
WE10
WE0
Environmental Section
Proposal Area
Test Station
Evaluation Trench
Burnt Flint Deposit (Tr. 103)
0
500
metres
Bedford Level Corporation Barrier Bank
Crane's Fen
Ouse Fen
Upper Delphs
Shelford Farm
Long Shelfords
Short Shelfolds
Lockpits Farm
Long Lockspits
Low Grounds
Potash Farm
Long Holmes

Figure 13.

Figure 13 shows the distribution of the main sediment types across the site. It is immediately striking that the 'sand' ridges, plainly visible in the field, extend across the site from southwest to northeast, even where they are not apparent in the surface topography. There also appear to be sand ridges to the north and southeast of the survey area. Between the sand ridges are the three deep southwest-northeast trending channels or 'gullies' containing various thicknesses and types of sediments. The northern (V) and southern (VIII) channels contain deep basal peat overlain by the thick silty clay unit. The central channel (VI) is rather narrow, and apparently only contains a thick silty clay sequence. It would seem that the base of the central channel (VII) is largely below the general level of the basal peat in the other channels. This suggests that either basal peat was never deposited in the central channel, or more likely it has been removed by erosion. It is likely that these channels were all active fluvial channels or tidal creeks during the early Bronze Age.

Environmental Sections

The stratigraphy and sampling of the environmental sections appears below. Environmental Section (ES) A allows the nature of the basal peat and silty clay sequence from the northern channel (V) to be investigated. ES B provides material from the silty clay in the narrow part of the central channel (VII), whilst ESC C allows investigation of the peat unit within the silty clay at the northeast end of the site. ESs D and F are marginal to the southern channel (VIII) where ES E provides material from silty clay sequence from the middle of the channel.

Section A - Trench 32 (bottom-up) – abandoned due to collapse
TL 38755 74378
Lower section
0-26cm soft grey silt with shell fragments and rootlets
26-55cm grey silty clay with abundant shells and rootlets
55-65cm brown organic silt
65-93cm chocolate brown organic silt
93-100 orange grey mottled silty clay
Upper section 100=0cm
0-25cm orange grey mottled silty clay
25-35- brown grey organic (peat)
35-75cm ploughsoil (grey alluvium)

Samples;	Bulks step1 0 to 100cm 5cm intervals	n=20
	Bulks step2 5 to 75cm 5cm intervals	n=14

Borehole A - Trench 32 (described top-down; due to replace collapsed section)
TL 38752 74374
0-40cm ploughsoil (grey alluvium)
40-45- brown grey organic (peat)
45-95 grey brown silty organic with rootlets
95-180 grey silt clay with rootlets and shells
180-235cm brown peat with rootlets and reed stems
235-297cm gravel and sand

Samples;	Bulks 35-235cm 10cm intervals	n=20

Section B – Trench 94 (described bottom-up)
TL 38878 74124
Below 0cm gravel and sand
0-27cm blue grey silty clay
27-50cm black brown wood peat
50-62cm grey brown organic silt with wood fragments
62-70cm light grey sandy silt with shells

70-102cm soft brown silty clay with shells and marl
102-122cm grey brown silty clay
122-142cm grey green silt with shells and rootlets
142-155cm grey silt with shells and reed stems
155-195cm brown crumbly peat
195-230cm ploughsoil (grey alluvium)
Samples; Bulks 20 to 185cm, 5cm intervals n=34

Section C - Near TS89 (described bottom-up)
TL 39398 74284
Lower section
0-32cm soft grey silty clay
32-58cm grey brown soft silt with wood
58-75cm brown organic silt
75-78cm pale silty clay
78-93cm grey organic silt with shells
93-112cm grey silt with wood and shells
112-132cm grey silt with shells (*Bithynia*) and rootlets
Upper section 132=0cm
0-15cm grey green silt with shells and fibrous rootlets
15-28cm grey silt
28-42cm orange iron stained silt clay
42-56cm grey silty clay
56-80cm brown grey organic (peat)
80-116cm ploughsoil (100-116cm grey alluvium)
Samples; Pollen tubes 0-130cm (not 120) 10cm intervals n=14
Pollen tubes upper 10-40cm 10cm intervals n=4
Bulks lower <0, 10-20, 20-29, 40-50, 65-70cm n=5
Bulks upper 0-10, 30-40, 100-110cm n=3

Section D - Trench 70 (described bottom-up)
TL 39382 73749
0-20cm orange brown sandy gravel
20-29cm grey silty sand
29-50cm organic silt
50-61cm brown organic (peat)
61-72cm orange brown clay
72-92cm brown organic clay
92-120 plough soil (organic clay)
Samples; Bulk 35-45cm (from 29-50cm) n=1

Section E - Trench 66 (described bottom-up)
TL 38913 73523
Lower section
0-24 cm grey-green sandy silt (slightly organic)
24-33cm sandy silt with flint pebbles and carbonate (race)
33-51cm mottled grey slightly organic silty clay
51-71cm grey-black shelly silt with rootlets
71-100cm grey-brown silt with shells and rootlets
Upper section 100=0cm
0-13cm grey-brown organic silt with shell fragments
13-42cm silty organic with abundant plant remains
42-58cm brown-black silty organic with rootlets
58-90cm ploughsoil (grey-brown alluvial silty clay)
Samples; Pollen tubes 10, 15, 20, 30, 40, 50, 60, 70, 80, 90cm n=10
Bulks 5-10cm to 85-90cm , 5cm intervals, 5cm gaps n=9
Bulks 15-25, 30-35, 45-50, 60-65, 80-85cm n=5

Section F - Trench 23 (described bottom-up)
TL 38755 73590
Lower section
0-9 cm grey-green sand and gravel with some silt
9-23cm grey silty clay with some organic and shells and pebbles
23-34cm grey-violet organic clayey silt with occasional shells

34-46cm grey-black silty organic with abundant shells (inc. *Bithynia*)
46-57cm buff-black silty organic with rootlets and occasional shell fragments
57-76cm black-grey silty organic with reed stems and occasional shells
76-86cm grey-buff silty organic with abundant bivalve shells
Upper section 86=0cm
0-21cm grey-brown silty organic silt with shells
21-42cm dark brown-black organic (peat) with a little silt
42-62cm red-brown rubified silty clay
62-85cm grey-brown mottled silty clay
85-110 ploughsoil (grey-brown alluvial silty clay)

Samples;	Pollen tubes 10, 20, 30, 40cm	n=4
	Pollen tubes 10 to 80cm 10cm intervals	n=8
	Bulks 15-20, 25-30, 35-40, 45-50, 60-65, 78-80cm	n=6
	Bulks upper 5-10, 15-20, 25-30, 35-40, 45-50,	n=5

The 'Big Channel' Analyses

As shown on Figure 2, in the summer of 2008 quarry operations exposed a section across one of the main Ouse palaeochannels immediate northwest of the Godwin Ridge-end. Accordingly, the opportunity was taken to record this cutting, with the specific aim of trying to established to what degree the river was brackish during the later Neolithic and Bronze Ages (fig. 14). In summary of the variously analyses applied, the diatoms indicate that brackish conditions became more fully marine in the middle of the 'roddon-like' silts with a return to more brackish conditions at the top of the sequence (Gregory, below). In contrast, the pollen does not attest to the development of widespread local saltmarsh at this time, suggesting that the denser salt water (the salt 'wedge') was confined mainly to the deeper channels (Boreham, below). However, pollen analyses show the progressive inundation of the lower Great Ouse Valley floor and the development of widespread reedswamp in response to the approaching marine limit.

Dinoflagellate analyses were the least successful (Farquhar, below), and although they showed at least some corroborative evidence for marine conditions (forams and shallow marine dinoflagellates), there was also some evidence for reworking of dinoflagellates from bedrock in the catchment.

Pollen Steve Boreham BSc, PhD

This report presents the results of assessment pollen analyses from nine samples of sediment taken from a section in the 'Big Channel' (TL 38023 73986). This contained a basal peat of presumed Neolithic age, which had been incised by a later channel filled by Bronze Age laminated 'roddon-like' silts thought to be associated with the marine incursion into fenland at this time. A single sample from the basal peat (base) was taken for pollen analysis adjacent to an aurochs/large cow bone discovered in the section. The remaining eight samples were taken from a nearby 140cm long sequence through the laminated 'roddon-like' silts. The basal part of this sequence (0-5cm) comprised grey shelly sand with pebbles, overlain by grey organic silt (5-30cm) from which pollen samples were taken at 7.5cm and 22.5cm. Above this (30-50cm) there was slightly organic, faintly laminated grey silt, which was sampled for pollen at 37.5cm. The strongly laminated 'roddon-like' silts (50-85cm) were sampled for pollen at 52.5, 67.5 and 82.5cm. Overlying this, a unit of massive grey silt with wood fragments was present at 85-125cm from which a sample for pollen was taken at

102.5cm. Above this, faintly laminated grey silt (125-145cm) was sampled for pollen at 137.5cm. Massive grey silt continued in the section up to 235cm, where a band of shells could be traced laterally in the section for many meters. This was, in turn overlain, by Iron Age silt and peat.

The nine samples were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereo microscope. The percentage pollen data from these samples is presented in Table 2. The percentage data from the 'roddon-like' silt sequence is also shown in Figure 15 as a pollen diagram.

Pollen analyses have long been successfully used as indicators of saltmarsh vegetation in Holocene sediments from southern England. The proximity of brackish or marine conditions is usually indicated by a substantial increase in the proportion of pollen from the Chenopodiaceae, since much of the halophytic vegetation of saltmarshes belongs to the fat hen family. However, the Chenopodiaceae are also ruderal weeds and a low proportion of this pollen type does not necessarily indicate incipient saltmarsh. Other palynological indicators of marine conditions include the sea pink (*Armeria maritima*) and the sea plantain (*Plantago maritima*).

Pollen concentrations varied between 38,800 and 195,273 grains per ml. Preservation of the fossil pollen grains (palynomorphs) was quite good, although counting was hampered by the presence of finely divided organic debris. Pollen counting of two slides for each sample produced seven assessment counts that exceeded a main sum of 100 grains, although none exceeded the statistically desirable total of 300 pollen grains. As a consequence, a little caution should be exercised in the interpretation of these pollen assessment results.

The sample from the basal 'Neolithic' peat, stratigraphically below the 'roddon-like' silts of the 'Big Channel' produced a pollen assemblage dominated by alder (*Alnus*; 57.9%), with hazel (*Corylus*; 10.1%) and grass (*Poaceae*; 8.3%). Other arboreal taxa included, oak (*Quercus*; 4.7%), lime (*Tilia*), ash (*Fraxinus*) and maple (*Acer*; all <3%). Notable herbs included sedges (Cyperaceae; 1.4%), the cabbage family (Brassicaceae) and buttercup (*Ranunculus*; both 1.1%). Spores of the polypody fern (*Polypodium*) were present (1.1%) and undifferentiated fern spores together accounted for 7.9%. Obligate aquatics were represented by pollen of the bur-reed (*Sparganium*; 4.5%) and reedmace (*Typha latifolia*; 0.3%).

The basal sample (7.5cm) from the Bronze Age 'roddon-like' silt sequence was dominated by grass (21.1%) and hazel (18.8%), with oak (13.3%), fat hen family (Chenopodiaceae; 8.6%) and alder (7.0%). Sedge pollen reached 3.9% and arboreal taxa included birch (*Betula*), pine, (*Pinus*), elm (*Ulmus*), lime, ash, willow (*Salix*) and ivy (*Hedera*; all <3%). Fern spores together reached 11.7% and bur-reed pollen was present at 1.5%. The sample from 22.5cm had a pollen spectrum dominated by alder (26.8%), with hazel (22.5%) and grass (16.9%). The fat hen family reached 9.9% in this sample, and arboreal taxa included oak (4.2%), birch and pine (both <2%). Fern spores together reached 12.7% and bur-reed was present at 6.6%. The sample from 37.5cm was dominated by hazel (27.1%), with alder (23.5%) and grass (17.6%). Herb pollen included mugwort (*Artemisia*; 2.4%), sedges, fat hen family, meadowsweet (*Filipendula*) and strapwort plantain (*Plantago lanceolata*; all 1.2%). Arboreal taxa included pine, lime, ash, maple and ivy (all 1.2%). Spores of the polypody fern were present (1.2%) and undifferentiated fern spores together rose to 17.7%. Bur-reed pollen reached 11.3% and reedmace was present at 1.0%.

The lowest sample from the strongly laminated silts (52.5cm) was dominated by grass (38.9%), with hazel (14.2%), alder (12.4%) and oak (11.5%). Notable herbs included the fat hen family (4.4%), sedges (2.7%) and meadowsweet (1.8%). Arboreal taxa included elm, lime, ash and willow (all <2%). The spores of the polypody fern were again present (0.9%) with undifferentiated fern spores together reaching 6.2%. Bur-reed pollen was present at 6.3% and reedmace pollen rose to 5.5%. The sample from 67.5cm was also dominated by grass (46.8%), with hazel (20.2%). Arboreal taxa included alder (5.5%), oak (4.6%), pine, elm and lime (all <3%). Notable herb pollen included sedges (5.5%) and the fat hen family (4.6%). Fern spores together were present at 4.6% and aquatic types were represented by

bur-reed (5.1%) and reedmace (1.7%). The sample from 82.5cm was dominated by hazel (29.0%) and alder (26.9%), with grass (21.4%). Arboreal taxa included oak (5.5%), pine, elm, lime, ash and willow (all <1%). Pollen of cereals was present (0.7%), and other herbs included fat hen family (2.8%), sedges (2.1%) and strapwort plantain (1.4%). Spores of the polypody fern were present in this sample (0.7%), and undifferentiated fern spores together reached 3.5%. The aquatic pollen in this sample included milfoil (*Myriophyllum alterniflorum*; 1.3%), broad-leaved pondweed (*Potamogeton*; 0.6%), bur-reed (6.9%) and reedmace (0.6%). The sample from 102.5cm was dominated by grass (34.0%), with hazel (22.0%) and alder (12.1%). Arboreal taxa included oak (7.8%), birch, pine, elm, lime, ash and willow (all <3%). Pollen of cereals was again present (0.7%), and other herbs included fat hen family (2.8%), meadowsweet and sedges (both 1.4%). Fern spores together reached 6.4%, and aquatics included broad-leaved pondweed (*Potamogeton*; 0.7%), bur-reed and reedmace (both 2.0%). The top-most sample from the 'roddon-like' silt sequence (137.5cm) was again dominated by grass (28.9%), with hazel (17.0%) and alder (16.3%). Notable herbs included the fat hen family (4.4%), sedges (3.0%) and buttercup (1.5%). Arboreal pollen included oak (8.9%), pine, lime ash and ivy (all <3%). Fern spores together reached 8.9%, and bur-reed (5.4%) and reedmace (3.4%) were also present.

The sample of peat (base) from stratigraphically below the 'roddon-like' silt sequence has a pollen assemblage interpreted as representing widespread alder carr (wet woodland) on the floor of the lower Great Ouse valley, with more distant mixed-oak woodland on drier ground. This is entirely compatible with the presumed Neolithic age of these sediments, since wet woodland is known to have been widespread on valley floors in southern England at this time. The pollen sequence from the 'roddon-like' silts shows that alder carr, mixed-oak woodland and reedswamp are the three dominant habitats represented. The taphonomy of channel sediments can be complex, especially where there is a tidal influence. In this sequence, the mixed-oak woodland component of the signal probably represents river-borne pollen from more distant dry-land forest environments in the hydrological catchment. In contrast, the wet woodland signal probably comes from relatively local alder (and willow) wet-woodland fringing the valley floor, and the reedswamp signal represents wetter local valley floor environments. The Chenopodiaceae exceeds 8% in the two basal samples (7.5cm & 22.5cm) from the silt sequence suggesting that saltmarsh vegetation was nearby. However, this part of the lower Great Ouse valley apparently did not support abundant saltmarsh vegetation for much of the Bronze Age marine incursion.

The common reed (*Phragmites australis*) has a fair degree of salt tolerance, and can be found growing in large stands in contemporary estuarine environments immediately upstream of the saltmarsh zone. It seems that this sequence records the inundation of local wet alder woodland on the valley floor as reedswamp expanded in response to higher water levels created by the approaching marine influence. Indeed the percentage pollen curves of alder and grass co-vary in anti-phase (when grass is high, alder is low and *vice versa*) throughout the sequence. Towards the top of the sequence, there is some indication of deeper open water from the obligate aquatics milfoil (*Myriophyllum alterniflorum*) and broad-leaved pondweed (*Potamogeton*), although both these taxa also exhibit some degree of salt tolerance. Arable farming is also indicated at the top of the sequence by low proportions of cereal pollen. Many other environments including marsh, meadowland, tall-herb and riparian (bank-side) communities are also represented in the pollen assemblages. The low percentages of the soil disturbance-indicator strapwort plantain may be the result of trampling (poaching) of soft ground by animals in damp pasture.

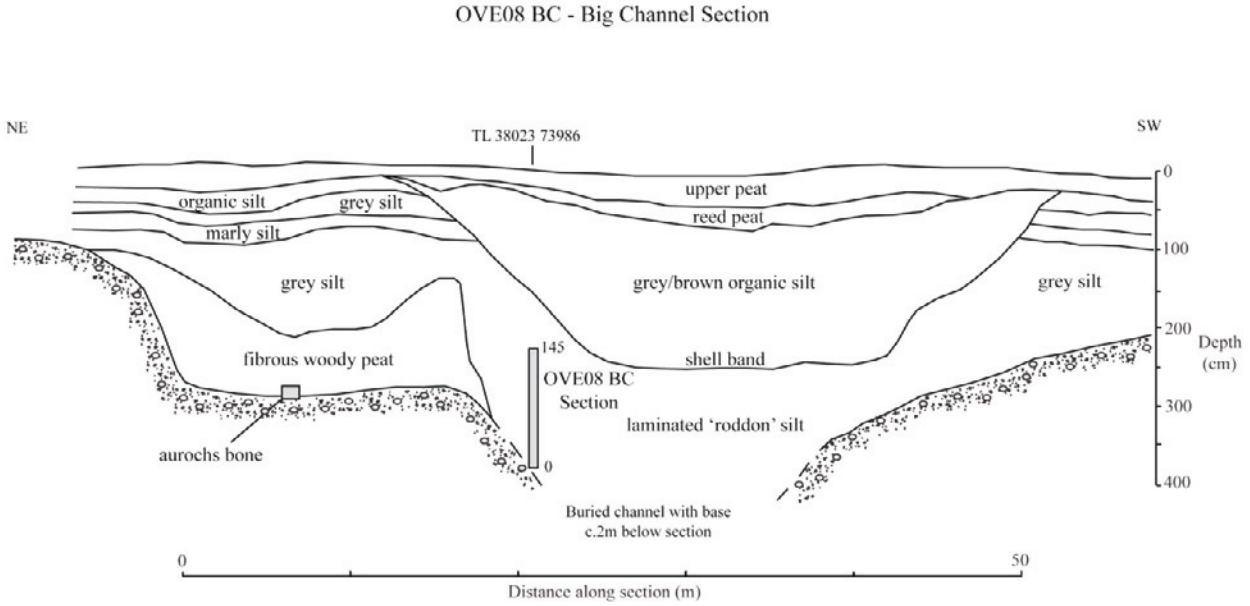
OVE08 BC - Big Channel Section
NE
TL 38023 73986
SW
organic silt
grey silt
marly silt
upper peat
reed peat
grey silt
grey/brown organic silt
grey silt
fibrous woody peat
shell band
145
OVE08 BC
Section
0
laminated 'roddon' silt
aurochs bone
Buried channel with base
c.2m below section
0
100
200
300
400
Depth
(cm)
0
50
Distance along section (m)

Figure 14.

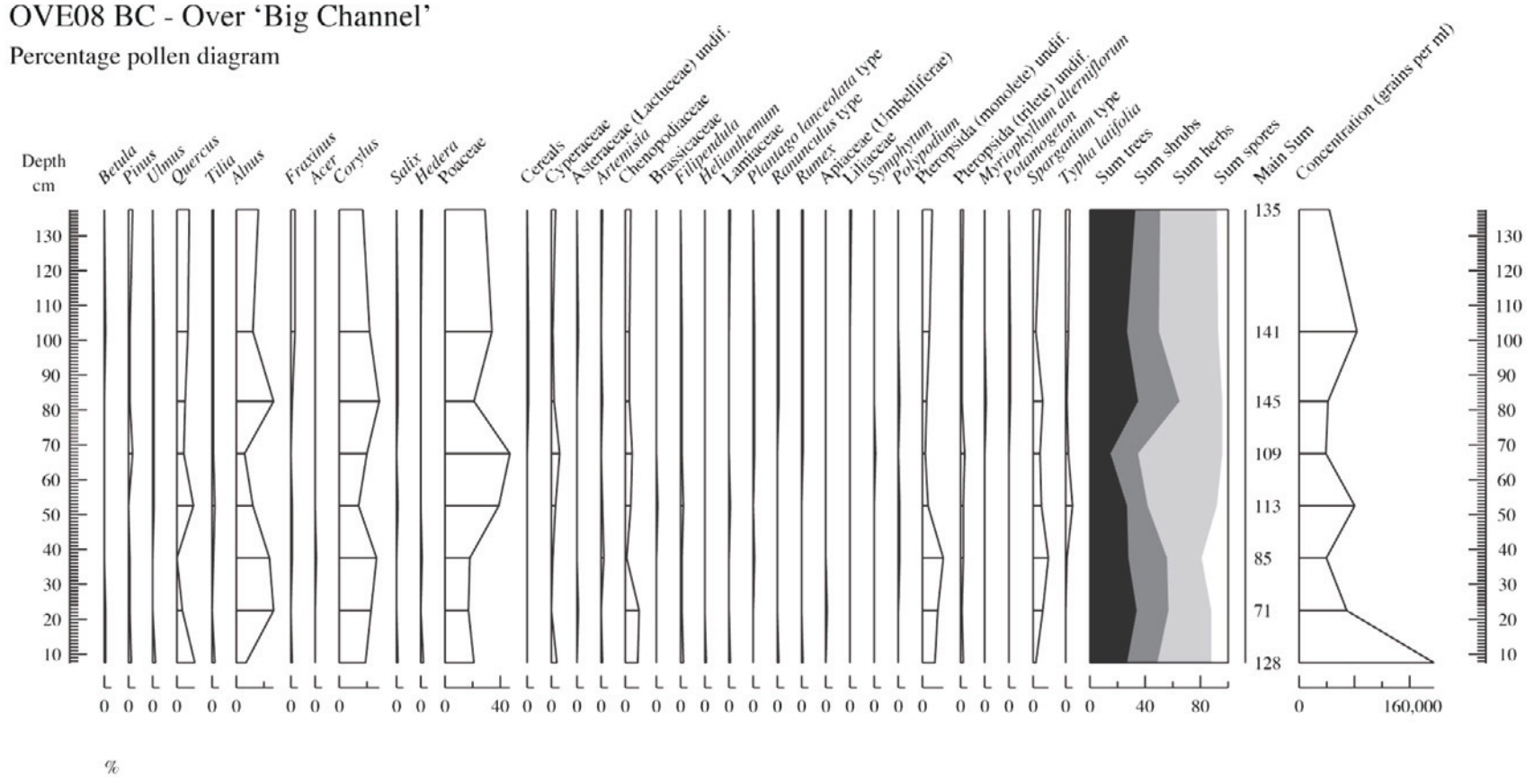
OVE08 BC - Over 'Big Channel'
Percentage pollen diagram
Depth cm
Betula
Pinus
Ulmus
Quercus
Tilia
Alnus
Fraxinus
Acer
Corylus
Salix
Hedera
Poaceae
Cereals
Cyperaceae
Asteraceae (Lactuceae) undif.
Artemisia
Chenopodiaceae
Brassicaceae
Filipendula
Helianthemum
Lamiaceae
Plantago lanceolata type
Ranunculus type
Rumex
Apiaceae (Umbelliferae)
Liliaceae
Symphytum
Polypodium
Pteropsida (monolete) undif.
Pteropsida (trilete) undif.
Myriophyllum alterniflorum
Potamogeton
Sparganium type
Typha latifolia
Sum trees
Sum shrubs
Sum herbs
Sum spores
Main Sum
Concentration (grains per ml)
%

Figure 15.

Table 2: Percentage Pollen Data

Sample	Base	7.5cm	22.5cm	37.5cm	52.5cm	67.5cm	82.5cm	102.5cm	137.5cm
Trees & Shrubs									
Betula	0.0	0.8	1.4	0.0	0.0	0.0	0.0	0.7	0.0
Pinus	0.0	1.6	1.4	1.2	0.0	2.8	0.7	1.4	3.0
Ulmus	0.0	2.3	0.0	0.0	0.9	0.9	0.7	0.7	0.0
Quercus	4.7	13.3	4.2	0.0	11.5	4.6	5.5	7.8	8.9
Tilia	2.5	1.6	0.0	1.2	1.8	0.9	0.7	1.4	1.5
Alnus	57.9	7.0	26.8	23.5	12.4	5.5	26.9	12.1	16.3
Fraxinus	0.7	0.8	0.0	1.2	0.9	0.0	0.7	2.8	3.0
Acer	0.4	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Corylus	10.4	18.8	22.5	27.1	14.2	20.2	29.0	22.0	17.0
Salix	0.0	0.8	0.0	0.0	0.9	0.0	0.7	1.4	0.0
Hedera	0.0	2.3	0.0	1.2	0.0	0.0	0.0	0.0	0.7
Herbs									
Poaceae	8.3	21.1	16.9	17.6	38.9	46.8	21.4	34.0	28.9
Cereals	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.0
Cyperaceae	1.4	3.9	0.0	1.2	2.7	5.5	2.1	1.4	3.0
Asteraceae (Lactuceae) undif.	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.7	0.0
Artemisia	0.0	0.8	0.0	2.4	0.9	0.0	0.7	0.0	0.7
Chenopodiaceae	0.4	8.6	9.9	1.2	4.4	4.6	2.8	2.8	4.4
Brassicaceae	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Filipendula	0.0	1.6	1.4	1.2	1.8	0.9	0.7	1.4	0.0
Helianthemum	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lamiaceae	0.0	0.8	0.0	0.0	0.9	0.0	0.0	0.0	0.7
Plantago lanceolata type	0.7	0.0	0.0	1.2	0.0	0.9	1.4	0.7	0.0
Ranunculus type	1.1	0.8	0.0	0.0	0.0	0.0	0.7	0.7	1.5
Rosaceae	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rumex	0.7	0.8	0.0	0.0	0.0	0.9	0.7	0.7	0.7
Thalictrum	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apiaceae (Umbelliferae)	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Liliaceae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Symphytum	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Lower plants									
Polypodium	1.1	0.0	0.0	1.2	0.9	0.0	0.7	0.0	0.0
Pteropsida (monolete) undif.	6.1	9.4	11.3	15.3	4.4	1.8	2.8	5.0	6.7
Pteropsida (trilete) undif.	1.8	2.3	1.4	2.4	1.8	2.8	0.7	1.4	2.2
Aquatics									
Myriophyllum alterniflorum	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Potamogeton	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.0
Sparganium type	4.5	1.5	6.6	11.3	6.3	5.1	6.9	2.0	5.4
Typha latifolia	0.3	0.0	0.0	1.0	5.5	1.7	0.6	2.0	3.4
Sum trees	4.8	27.3	33.8	28.2	27.4	14.7	35.2	27.0	32.6
Sum shrubs	66.2	21.9	22.5	28.2	15.0	20.2	29.7	23.4	17.8
Sum herbs	10.4	39.1	31.0	24.7	50.4	60.6	31.0	43.3	40.7
Sum spores	14.4	11.7	12.7	18.8	7.1	4.6	4.1	6.4	8.9
Main Sum	278	128	71	85	113	109	145	141	135
Concentration (grains per ml)	76122	195273	68928	39466	80448	38800	41850	83652	43687

Taken together, the 'Big Channel' sequence shows the change from widespread wet alder woodland on the valley floor of the lower Great Ouse in the Neolithic, to a Bronze Age marine incursion typified by inundation of the valley floor to form an extensive reedswamp. Saltmarsh vegetation may have been established nearby, but was never a major part of the local landscape. There is some evidence for a mosaic of arable and pastoral meadows and fields, together with mixed-oak woodland on more distant drier ground. As always, it is important not to over-interpret assessment pollen counts, although in this case there is compelling evidence for the nature of the Bronze Age lower Great Ouse valley.

Dinoflagellate Cyst Analysis Sarah A. Farquhar MA, MSci. PhD

The project involved the assessment study of eight samples of organic sediment. The aim of this investigation was to determine whether the dinoflagellate cysts could be used for palaeoenvironmental and palaeosalinity reconstructions at this site. Counting and analysis of the samples showed that the rate of occurrence of dinoflagellate cysts was too low to draw any robust conclusions. Thus the use of dinoflagellate cysts for palaeoenvironmental reconstruction at this site cannot be recommended.

Eight samples were taken for analysis with 10-15g of wet sediment sampled for each. The sample sizes are shown in Table 3. The samples were prepared using the standard cold hydrofluoric acid preparation method for dinoflagellate cysts. One tablet of Lycopodium clavatum (batch number 938934) was added to each sample as an exotic marker. The samples were rich in organic matter and therefore required an oxidising treatment with dilute nitric acid. The residues were sieved over a 10μm nylon mesh and the samples were then mounted on microscope slides using Kaiser's glycerine jelly.

Slides from each sample were scanned for dinoflagellate cysts using a Leica DMLB microscope at x40 using non-overlapping traverses. These were scanned until either a count of 250 cysts was achieved, or the allocated time of 90 minutes per sample was reached. Foraminifera linings were counted concurrently.

Height (cm)	**Weight** (g)
5 - 10	13.205
20 - 25	14.116
35 - 40	15.388
50 - 55	15.631
65 - 70	12.883
80 - 85	16.752
100 - 105	11.680
135 - 140	15.039

Table 3: Wet sediment sample weights taken for dinoflagellate analysis

The samples all contained high proportions of organic matter. This had a diluting effect on the dinoflagellate cysts that were present and hampered counting. Generally, cyst abundances were low and preservation was relatively poor (Table 4). However, dinoflagellate cysts and foraminifera linings were found in all the samples.

Height (cm)	***Lycopodium clavatum***	**Foraminifera linings**	**Dinoflagellates cysts**
5 - 10	8	7	5
20 - 25	7	16	5
35 - 40	7	20	6
50 - 55	11	22	8
65 - 70	8	14	5
80 - 85	2	32	11
100 - 105	6	33	6
135 - 140	4	12	1

Table 4: Abundances of dinoflagellate cysts and foraminifera linings in the samples

The very low counts recorded mean that the statistical errors in the concentration data (Table 5) are likely to be significant. For example, the concentrations appear be reasonably high in places (80-85cm), although this could be an artefact of counting only two marker grains, and cannot be relied upon.

Depth (cm)	**Foraminifera concentration (ml^{-1})**	**Dinoflagellate cyst concentration (ml^{-1})**
5 - 10	1288	920
20 - 25	2723	851
35 - 40	3704	1111
50 - 55	2488	905
65 - 70	2433	869
80 - 85	18859	6483
100 - 105	9992	1817
135 - 140	3973	331

Table 5: Concentrations of dinflagellate cysts and foraminifera linings in the samples

The diluting effect of organic matter in the samples means that, in order to obtain a full dinoflagellate count, the number of slides and hence the time required, would be considerable.

Depth (cm)	**5-10**	**20-25**	**35-40**	**50-55**	**65-70**	**80-85**	**100-105**	**135-140**
Distatodinium paradoxum?	3							
Homotryblium spp.		1	2	2		1		
Hystrichokolpoma rigaudiae		1		2	1			
Lingulodinium machaerophorum			1			2	2	
Operculodinium centrocarpum	2	2	3	1	2	4	2	1
Reticulatosphaera actinocoronata							1	
Indistinct		1		3	2	4	1	
Total	5	5	6	8	5	11	6	1

Table 6: Breakdown of species counts

Some isolated observation and identification of dinoflagellate taxa was possible, although as mentioned above, without an entire assemblage it becomes difficult to draw meaningful conclusions from their presence. There were no specimens of species that are indicators of open marine conditions.

Two extant species that are noted as neritic (shallow marine) watermass dwellers were present:

Operculodinium centrocarpum sensu stricto is present in all the samples, although samples 50-55cm and 135-140cm contained only one specimen.
Lingulodinium machaerophorum occurs in three samples, 35-40cm; 80-85cm; 100-105cm.

Several extinct species were also noted, which suggests that there was at least some input from eroding bedrock re-worked into the sediments. Three of these taxa are Paleogene-Neogene in their range:

Distatodinium paradoxum: three specimens were noted in the sample from 5-10 cm.

Homotryblium spp. has a range-top in the Miocene, but is recorded in samples from 20-25cm, 35-40 cm, 50-55cm and 80-85cm.

Reticulatosphaero actinocoronata was recorded in the sample from 100-105cm. It has a range top in the Lower Pliocene.

Hystricholpoma rigaudiae has a recorded range-top in the middle Pleistocene. It is recorded in samples from 20-25cm, 65-70cm and 50-55cm.

Diatom palaeo-salinity Assessment Dr Caroline Gregory

This project involved studying eight samples of organic sediment for the Cambridge Archaeological Unit. The aim of this investigation was to determine whether the samples were of marine origin.

The sediment samples were stored in airtight bags and refrigerated until preparation took place. The samples comprised 5cm lengths of sediment from a geological section. The samples were prepared on 13 November, 2008 by Neil Tunstall, Senior Laboratory Technician, Science Laboratories, Geography Department at Durham University.

Small amounts of sediment were taken along the length of each sample to make up approximately 1g of sample. The exact weight of each sample prepared for diatom analysis is shown in Table 7.

The preparation of diatom samples for investigation using light microscopy was undertaken following standard methodology (e.g. Plater *et al*. 2000). The samples were digested in 100ml of 20% H_2O_2 by heating gently in a water bath for up to 24 hours, or until all organic matter was removed from the sample. For each sample two drops (a) and four drops (b) of digested sample were pipetted on to two cover slips with 10 drops of distilled water and dried on a warm hotplate. The duplicate cover slips (a) and (b) were then inverted and placed onto a glass slide, using Naphrax UK, a high refractive index medium mountant with a refractive index of 1.73. After further gentle heating and cooling to set the mountant the diatom slides are ready to be counted.

Sample No.	Depth (cm)	Weight of sediment (g)
1	5 - 10	1.31
2	20 - 25	1.08
3	35 - 40	0.76
4	50 - 55	1.20
5	65 - 75	1.01
6	80 - 85	1.02
7	100 - 105	1.09
8	135 - 145	0.90

Table 7: Sample Information

A minimum of 250 diatoms were identified from each of the samples at a magnification of x1000 using the keys of Hartley (1996) and Van der Werff & Huls (1958 –74).

Broken or obscured diatom valves were only counted if the over 50% of the valve was present/visible. The preservation in all of the samples was quite poor, with a large proportion of broken valves. Diatoms were very sparse in several of the samples.

Once the diatoms counts were completed the diatom species were assigned a salinity classification. The system used to classify diatoms according to their salinity tolerance is called the halobian system of classification. This system was first devised by Kolbe (1927) and has been subsequently modified by Hudstedt (1953; 1957) and Hemphill-Haley (1993) amongst others. The halobian system of classification has four main groups, an explanation of which is shown in Table 8.

Classification	Salinity range (‰)	Description
Polyhalobous	>30	Marine
Mesohalobous	0.2 to 30	Brackish
Oligohalobous-halophile	<0.2	Freshwater – stimulated at low salinity
Oligohalobous-indifferent	<0.2	Freshwater – tolerates low salinity
Halophobous	0	Salt-intolerant

Table 8: The halobian classification system (Hemphill-Haley 1993).

A basic interpretation of this classification system should see a change in the salinity classes of the diatom assemblages as one moves from a tidal flat environment through saltmarsh and into the freshwater environments above the Highest Astronomical Tide (HAT). As one would expect, polyhalobous species occur in sub-tidal areas and on the tidal flat along with mesohalobous diatom species. As marine influence decreases oligohalobous-halophilous and oligohalobous-indifferent species will increase as polyhalobous and mesohalobous species decrease. Finally, halophobous species will occur above the HAT in the freshwater environments.

Diatom

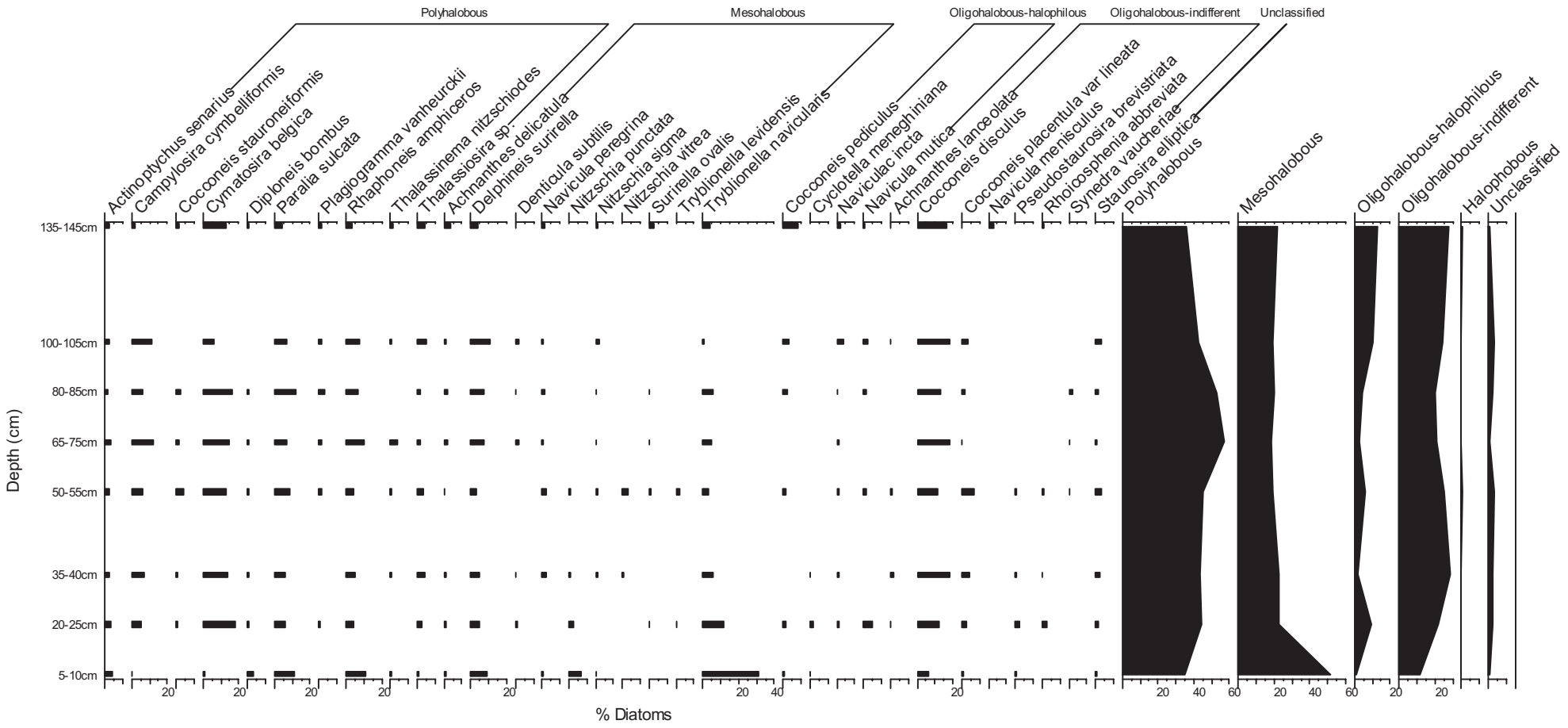

Figure 16: Percentage of diatoms in samples from the Big Channel, samples (OVE08 BC). Only diatom species reaching 2% of the total are included. The proportion of diatoms of each salinity classification within the dataset is shown on the right of the diagram**.**

The ecology of the diatoms followed Vos & de Wolf (1993).

The dominant diatom species that reach 2% of the total diatom assemblage are illustrated in Figure 16. The proportion of diatoms of each salinity classification in the total assemblage is summarised to the right of the diagram. The ecological preferences of the dominant diatom species (after Vos & de Wolf 1993) are summarised in Table 9

All of the assemblages appear to represent assemblages from the intertidal zone. There is a mixture of marine plankton such as Actinoptychus senarius and Paralia sulcata and other marine/brackish epiphytic and benthic species associated with an intertidal mudflat or lower marsh environment.

Between approximately 60 - 90% of the diatom assemblages originating from the Big Channel sequence, are comprised of polyhalobous (fully marine) and mesohalobous (marine/brackish) diatom species (fig. 16). The ecology of 24 of the dominant species could be classified according to Vos & de Wolf (1993). They comprise seven marine epipelic species, five marine tychoplankton, four brackish/fresh epiphytes, three marine plankton and one each of marine/brackish epipsammon, fresh epiphyte, brackish/fresh tychoplankton, brackish/fresh plankton and brackish/fresh aerophious (Table 9). The peak of the marine influence occurs at 65-75cm, corresponding with slightly higher percentages of the polyhalobous species *Cymatosira belgica* and *Campylosira cymbelliformis*, both marine tychoplanktonic species typical of open marine tidal channels, estuaries, mudflats and saltmarshes. 5-10cm has the most brackish influence with the highest percentage of *Tryblionella navicularis* classified as a marine brackish epipelon species.

As the samples are taken from 5cm lengths the resolution is very coarse. Samples taken at 1cm intervals would have yielded information at a much finer resolution and possibly shown a more definite change in depositional environment.

In conclusion, the diatom assemblages from the 'Big Channel' were deposited in an intertidal environment. Although the preservation was poor, it was possible to identify 250 diatoms from each sample. Equally, while the resolution was coarse, it was possible to determine that the assemblage from 5 - 10cm has the most mesohalobous, or brackish species and the assemblage at 65-75cm contains the most polyhalobous, or fully marine species.

Species name	Salinity Classification	Ecology
Actinoptychus senarius	Polyhalobous	Marine plankton
Campylosira cymbelliformis	Polyhalobous	Marine tychoplankton
Cocconeis stauroneiformis	Polyhalobous	
Cymatosira belgica	Polyhalobous	Marine tychoplankton
Diploneis bombus	Polyhalobous	Marine/brackish epipelon
Paralia sulcata	Polyhalobous	Marine plankton
Plagiogramma vanheurckii	Polyhalobous	Marine tychoplankton
Rhaphoneis amphiceros	Polyhalobous	Marine tychoplankton
Thalassionema nitzschiodes	Polyhalobous	Marine plankton
Thalassiosira sp.	Polyhalobous	
Achnanthes delicatula	Mesohalobous	Marine/brackish epipsammon
Delphineis surirella	Mesohalobous	Marine tychoplankton
Denticula subtilis	Mesohalobous	
Navicula peregrina	Mesohalobous	Marine/brackish epipelon
Nitzschia punctata	Mesohalobous	Marine/brackish epipelon
Nitzschia sigma	Mesohalobous	Marine/brackish epipelon
Nitzschia vitrea	Mesohalobous	
Surirella ovalis	Mesohalobous	Marine/brackish epipelon
Tryblionella levidensis	Mesohalobous	
Tryblionella navicularis	Mesohalobous	Marine/brackish epipelon
Cocconeis pediculus	Oligohalobous-halophilous	Brackish/freshwater epiphyte
Cyclotella meneghiniana	Oligohalobous-halophilous	Brackish/freshwater plankton
Navicula cincta	Oligohalobous-halophilous	Marine/brackish epipelon
Navicula mutica	Oligohalobous-halophilous	Brackish/freshwater aerophilous
Achnanthes lanceolata	Oligohalobous-indifferent	Freshwater epiphyte
Cocconeis disculus	Oligohalobous-indifferent	Brackish/freshwater epiphyte
Cocconeis placentula var. lineata	Oligohalobous-indifferent	Brackish/freshwater epiphyte
Navicula menisculus	Oligohalobous-indifferent	
Pseudostaurosira brevistriata	Oligohalobous-indifferent	Brackish/freshwater tychoplankton
Rhoicosphenia abbreviata	Oligohalobous-indifferent	Brackish/freshwater epiphyte
Synedra vaucheriae	Oligohalobous-indifferent	
Staurosira elliptica	Unclassified	

Table 9: Summary of diatom ecology salinity classification after Hempill-Haley (1993) and ecology after Vos & de Wolf (1993).

EXCAVATION RESULTS

The excavations occurred between April and July 2007, with the site first being stripped to the surface of the buried soil and, otherwise, the top of the ridge's sands (figs. 5 & 6). Thereafter, following extensive sampling of the palaeosol (see below), the area was stripped again, this time to the surface of the natural yellow-orange sand throughout. After this, the area was re-planned; pits and postholes were hand-excavated half-sectioned, and linear features were appropriately sample-dug. Finally, a third phase of mechanized digging was implemented and a series of deep trenches were cut alongside the limits of the excavation in order to check the nature of deposits of the surrounding palaeochannels, and the potential presence of archaeological finds within these deposits.

Almost belying its paucity of features *per se*, this was a very prolific site and more than 41,500 artefacts were recovered, including some 12,800 worked flints and 6,745 pottery sherds (and also an array of 'special finds'). It must however, be stressed that the vast majority of this material derived the site's buried soils and, therefore, the manner of its sample recovery - the excavation methodology - warrants detailing.

Methodology

The preservation of a buried soil covering most of the surface of the ridge required some specific methodological procedures in order to evaluate its depositional/stratigraphic potential and finds densities. The first step involved the collection of the extensive archaeological finds scattered all over the surface of the ridge. The area was thus intensively fieldwalked and all recovered finds were attributed a unique number and planned; a total of 560 finds were thus collected:

Finds Cat.	**Number**	**Weight** (g)
Pottery	244	2407
Flint	194	1623
Burnt Flint	80	263
Burnt Stone	23	921
Bone	417	6548

Table 10: Surface finds

The second stage saw the extensive sampling of the buried soil through the hand-digging of metre-square test pits (fig. 17). In order to evaluate the density of the horizon's finds, an initial series was laid-out on a staggered ten-metre grid across the southern slope (30), where the buried soil was preserved. These were dug in spits of 10cm to gauge depositional processes. This was subsequently abandoned as no coherent chronological vertical-distribution of material could be observed. Furthermore, the uppermost 20cm of the 'unaltered' sand was also dug so as to check any penetration of the finds down into the natural; all of these deposits were 100% sieved with a 5mm mesh to ensure maximal/absolute finds retrieval.

Another 80 metre-test pits were dug alongside the northern and western edges of the site, in order to understand the inter-relationship between the sand ridge and the surrounding palaeochannel, and also appraise finds densities within the ridge-flank waterwashed sand deposits. These were generally laid-out in metre-wide transects cut at regular intervals transversally across its edge/flanks (fig. 17; 70-5). Within these, only one test pit in four was sieved to control the number of finds; other sieved test pits were sited 'singularly' along this littoral and between the transects to further the sample interval.

In the light of the buried soil's incredible densities (see below), in order to realistically maximize finds retrieval, thereafter, three 'chequerboard areas' (CBA 1-3) were designated for what was, essentially, alternate buried soil (metre-) square excavation (figs. 7 & 17); hand-dug, these deposits were not, though, sieved. The areas selected for this intense sampling were based on a variety of criteria:

1) Extending over 80sqm, 42 test pits were dug in a quasi-linear swathe across the ridge's crown to correspond with the magnetic susceptibility 'high value' zone there.

2) Extending over 25sqm in the southwestern portion of the site, 15 test pits were dug where the first-phase grid-sampling indicated that worked flint densities occurred great than 100 pieces per square and that the pottery values were greater than 40 pieces. With the buried soil dug as one spit/depositional unit, the uppermost 20cm of the 'unaltered' natural sand was, again, also excavated.

3) Sub-divided by the line of the main evaluation trench, across 128 test pits were dug along the ridge's southern slope (c. 200sqm; with another seven dug to locally infill the alternate grid) and corresponding to where the initial gird-sampling indicated worked flint densities in excess of 200 pieces per metre (also dug as one unit and penetrating 20cm into the ridge's sands).

Several specifically environmental 'samplings' were also taken. Firstly, bulk samples of the buried soil for flotation (see Ballantyne below) and, secondly, and as outlined above, samples were taken every 5m across the entire surface of this horizon for the purposes of phosphate analysis.

Additional areas were also hand-excavated (though not necessarily by metre-units) across the ridge's northern flank (fig. 17, F-I). This was undertaken to further the recovery of both disarticulated human remains and other 'special finds deposits in this immediate area and to investigate what appeared to be riverside 'midden' (F. 214; fig. 17, H); another metre-excavated transect was also dug cross-axially east-west across the centre of this feature (see below).

Finally, ten sondages were cut alongside the western and northern edges of the ridge in order to check the nature of the surrounding palaeochannel deposits and the potential presence of waterlogged remains. Very little artefactual material was found in any of these; though, in the cutting adjacent to F. 214, the basal deposits of two 4.00sqm areas were hand-dug to evaluate the occurrence of burnt flint (fig. 17, J), but which proved to be extremely low. Note, that of the site's waterlogged wood, unfortunately, aside from a bucket-base fragment, these proved rather scrappy and, on the whole, rather disappointing (see Taylor below).

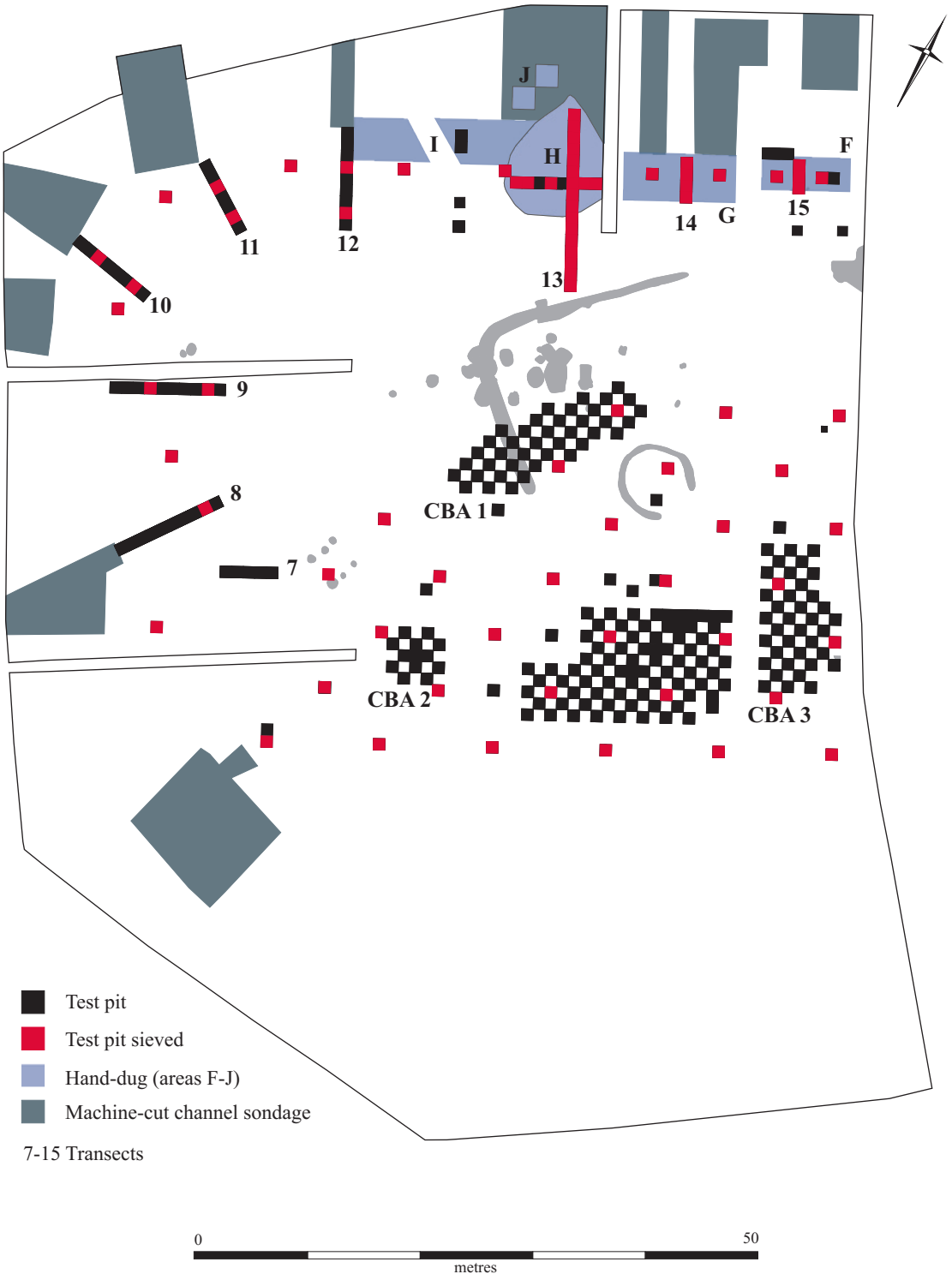
J
I
H
F
G
11
12
13
14
15
10
9
8
7
CBA 1
CBA 2
CBA 3
Test pit
Test pit sieved
Hand-dug (areas F-J)
Machine-cut channel sondage
7-15 Transects
0
50
metres

Figure 17.

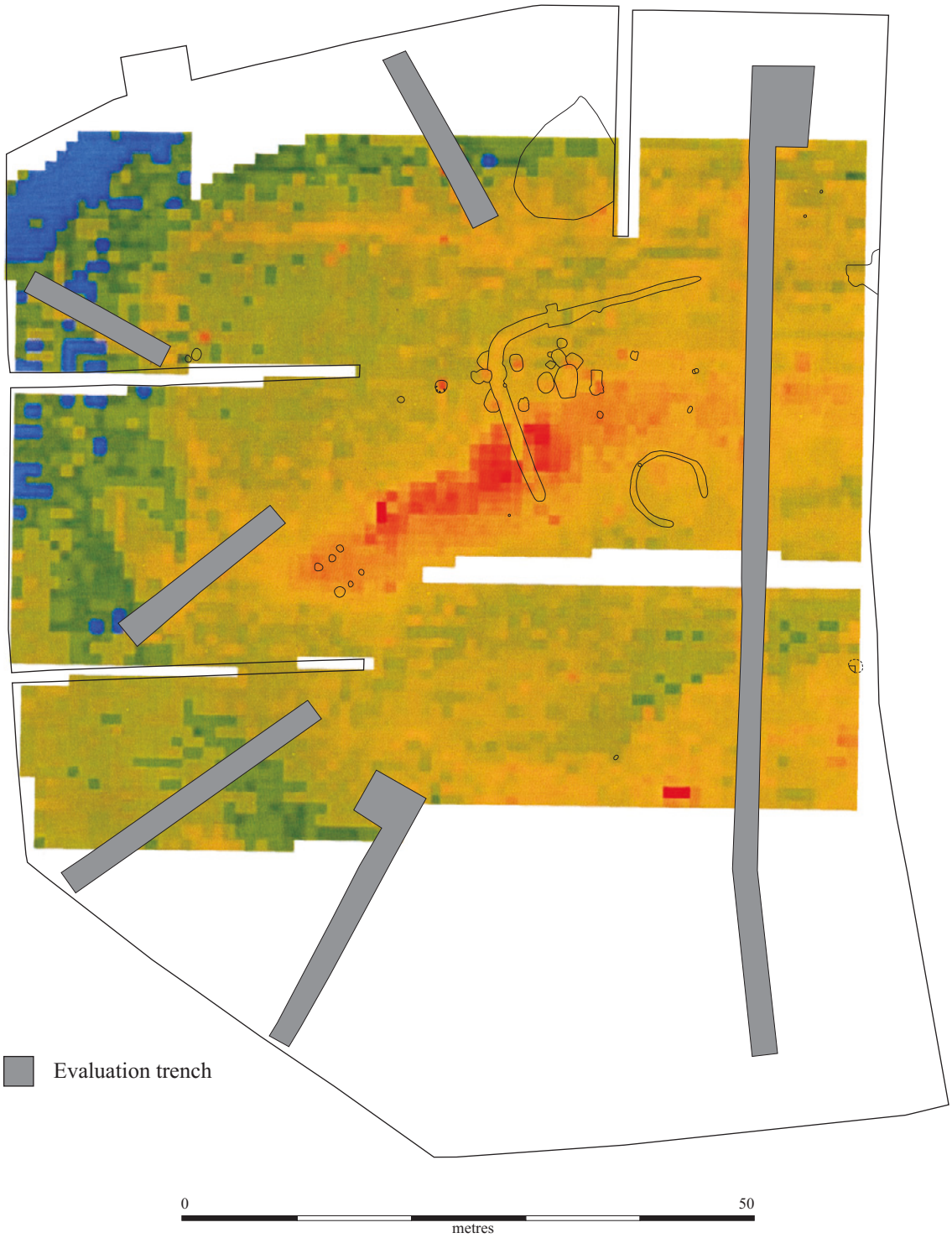

Figure 18.

Site Sequence

Rather unusually, the Mesolithic and Late Iron Age are the most fully represented periods on this site; respectively, an extensive flint scatter and a rather modest farmstead (the latter also being associated with riverside ritual complex; figs. 17 & 19). Bracketed by these two horizons, the otherwise scant evidence suggests a more or less continuous activity on this part of the ridge during the later prehistory. The section that follows includes a preliminary discussion of the distribution and spatial patterning of this material.

Mesolithic

The buried soil sampling certainly confirmed the existence of major Mesolithic scatter site at this locale and the site yielded no less than 12,000 flint artefacts. While the scatter seems to extent eastwards, artefact distributions indicate that the core of the occupation was localised to this part of the ridge.

Nearly all finds have been found in the buried soil (and in residual status in later features), with an minor subset occurring within the underlying sand, most probably corresponding to finds that percolated downward. Because of the mixed nature of the buried soil, no clear spatial organisation can be unravelled from this scatter as, for instance, Mesolithic microliths were found in association with Iron Age potsherds. However, detailed spatial analysis of its diverse distributions is still certainly warranted.

As discussed by Billington below, analysis of this scatter's lithics suggests that it corresponds to a palimpsest, blurring several episodes of use of the ridge distributed over both Early and Late Mesolithic.

No cut features can be attributed to this period.

Early Neolithic

Indications of the Early Neolithic period are rare. One of the problems rests in the difficulty to disentangle Early Neolithic flintwork from the later Mesolithic industries. It is thus possible, if not probable, that a portion of the Mesolithic material incorporates Early Neolithic artefacts. This possibility is reinforced by the discovery of two, definitely Neolithic leaf-shaped arrowheads (TP50A & TP59B), and the occurrence of a handful of potential Neolithic potsherds in both a tree-throw (F. 220) and within the buried soil generally.

No cut features can be attributed to this period.

Later Neolithic

The Late Neolithic is poorly represented, with a single chisel arrowhead (TP20J), few finds of Peterborough Ware (10 test pits) and a single Grooved Ware sherd.
No cut features can be attributed to this period.

Early Bronze Age

Traces of Early Bronze Age occupation are somewhat more evinced, with barbed-and-tanged arrowheads (three surface finds and three in test pits), 15 occurrences of Beaker pottery (17 sherds), two of Food Vessels and seven of Collared Urn. The presence of several flake cores, as well as the use of residual Mesolithic material for the knapping of a barbed-and-tanged arrowhead demonstrates that flint knapping occurred during this period.
No cut features can be attributed to this period.

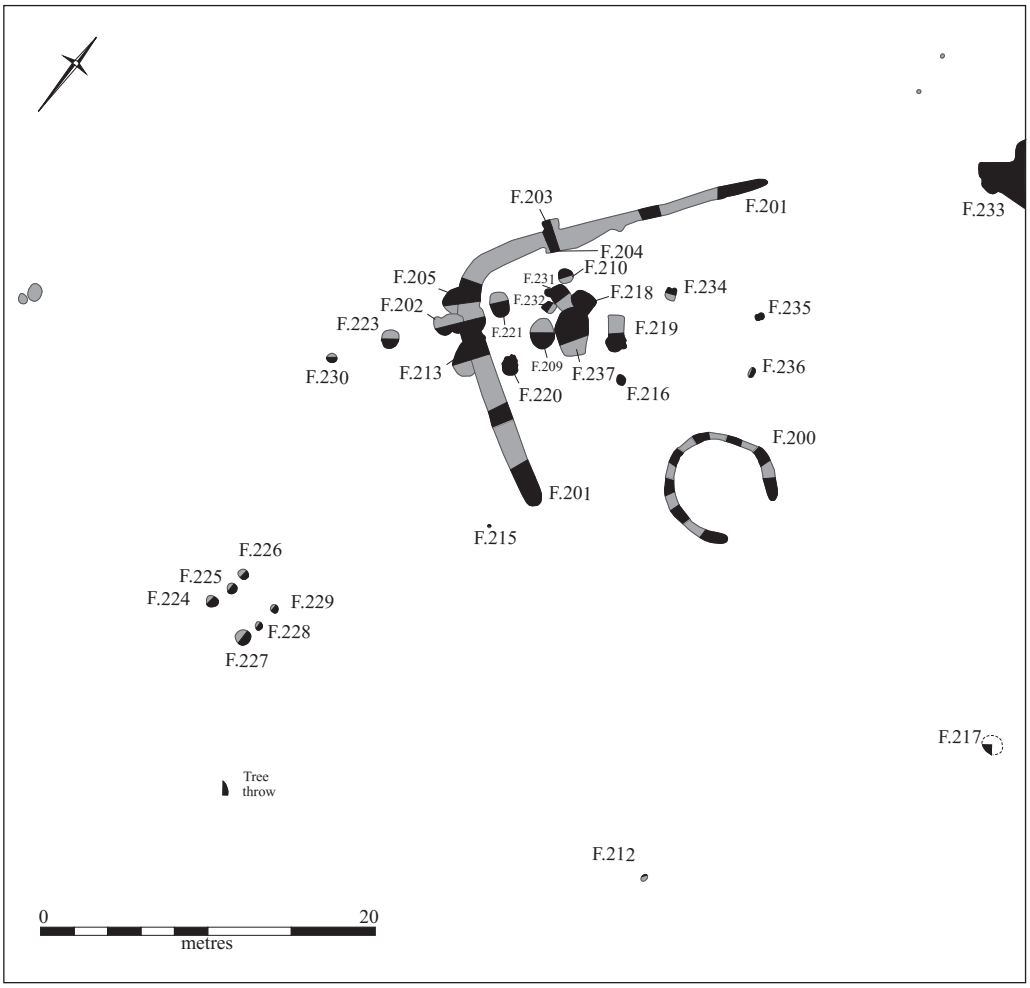
F.203
F.201
F.233
F.204
F.205
F.231
F.210
F.218
F.234
F.202
F.232
F.235
F.223
F.221
F.219
F.230
F.213
F.209
F.237
F.236
F.220
F.216
F.200
F.201
F.215
F.226
F.225
F.224
F.229
F.228
F.227
F.217
Tree throw
F.212
0
20
metres

Figure 19.

Figure 20.

Later Bronze Age

Although no cut features can be attributed to this period with any certainty, pottery of this attribution constitutes the bulk of the ceramic material within the Iron Age features (35 vessels; 560 sherds) and also the vast majority of the pottery within the buried soil generally (with five Deverel-Rimbury sherds also being amongst this material (see Knight and Brudenell below). This being said, three features associated with the later Iron Age pitting cluster only yielded Later Bronze Age material (**F. 210**, **F. 220** & **F. 234**). While it is conceivable that this is a true reflection of their date, given the high degree of ceramic residuality, albeit tentatively, they are assigned to the site's subsequent usage. Similarly in this regard, a few possible 'feature-fragments' were exposed in the sides of test pits within the main sampling grid and, essentially unattributed, these might relate to occupation/usage at this time (**F. 211**, **F. 212**, **F. 215-17** and **F. 238**; fig. 19)

Before progressing it should be mentioned that both at this sub-site and the larger Godwin Ridge excavations the sheer quantity of Later Bronze Age material within its buried soil is, perhaps, the most pressing issue of its interruption - just what accounts for this quantity? - and, accordingly, this issue will be further discussed below (see *Distributional Patterning*).

Later Iron Age

Including both tree-throws (**F. 220**, **F. 232**, **F. 235** & **F. 236**) and an animal burrow (**F. 223**), less than 40 features were present, a rather limited number given the size of the excavated area (fig. 19). Unsurprisingly, these were almost all located on the crest of the ridge. The only major 'feature-set' on the southern slope was roundhouse **F. 200**, and which will hereafter be referred to as Structure 1. This was defined by a circular shallow gully (36-45cm wide; max. 12cm deep), approximately 7m in diameter, but with a 2m wide entrance-gap facing eastward. Despite the presence of a very high level of residual Late Bronze Age pottery, this structure was most certainly of Late Iron Age date.

Northwest of Structure 1 was a cluster of pits: **F. 202**, **F. 205**, **F. 206**, **F. 209**, **F. 210**, **F. 213**, **F. 218**, **F. 219**, **F. 221**, **F. 231**, **F. 232**, **F. 234** and **F. 237**. Varying from 0.50-1.90m across/long and 10-30cm deep, these are generally attributable to the later Iron Age, but also included a very high level of residual material (35-70% Late Bronze Age sherds by weight, see Brudenell below); indeed, as discussed above, three of the feature only yielded early pottery within them and are of ambiguous date.

The function of these pits is far from clear. Only F. 218, which truncated pit F. 231, seems to have had a specific function, as suggested by a lining of pale grey clay on its sides (?oven or for water). It should, though, be noted that this feature also had amongst the lowest level of residual Late Bronze Age pottery (19% by weight).

Two of the features within the main pitting cluster (F. 205 & F. 206) were truncated by an 'L'-shaped length of enclosure ditch, **F. 201**, and which clearly was associated with Structure 1 (fig. 17). This ditch was approximately 30m long and ran on a southeast-north axis, before turning, at a right-angle, on a southwest-northeast alignment. Its width varied from 0.75-1.2m and its depth was up to 30cm. Within this feature two re-cuts were distinguished, **F. 204** and **F. 203**, which probably correspond to mucking-out episodes.

To the west of this area, the ridge had a small protrusion, which had been utilised during the later Iron Age to site a rectangular structure (3 x 5m; Structure 2). This was oriented on a roughly southwest-northeast axis and was defined by six substantive postholes (**F. 224-229**). Oddly enough, the three postholes constituting its northern side yielded some 420 fragments of baked clay (4351g), while the fills of the southern postholes only had four such fragments (57g). The occurrence of impressed 'grooves' and the quality of this material suggests that these fragments were part of a wattle-and-daub wall. The discrepancy between the northern and southern postholes is difficult to account for and cannot be explained by mere taphonomy. The shape of this structure, and through analogy with other Iron Age sites, suggests that it was probably a raised granary.

The only other cut feature of note in the area was a rather irregular pit/hollow, **F. 233** (1.55m wide and 35cm deep), along the eastern edge of excavation and which yielded mixed later Bronze and Iron Age ceramics.

Sealed by rather thick deposits of waterwashed sand (up to 25cm depth) no cut features as such occurred across the area of the northern ridge-slope. This 'washing' was probably contemporaneous with the later Iron Age activity, as demonstrated by the recovery of a clutch of three bone weaving combs within it.

Immediately on top of this deposit was amongst the most significant features on the site. **Feature 214** was a large, sub-circular 'midden-like' deposit (7 x 10m), up to 1.2m thick. This 'heaped' feature is clearly exceptional given the quantity and quality of material recovered from it: more than 2,000 potsherds, three copper alloy brooches (see Haselgrove below), and almost 4,000 animal bones (including dismembered horses; see Seetah below and fig. 20). Although these figures need to be slightly mitigated by the occurrence of residual material (as evidenced by the presence of struck flints), the quantity of material culture and faunal remains within it is certainly exceptional. As Ballantyne discusses below, the paucity of 'plant food waste' within its environmental samples could though question its identification as a 'midden' as such and rather suggests that it might have been an intentionally laid surface/platform.

As detailed below (see Brudenell), the presence of definitive post-Conquest ceramics within F. 214 does not automatically imply that it post-dated the settlement. The contemporaneity of the settlement and the 'midden' is, in fact, suggested by environmental studies, which show that F. 214 was located on the margins of a much-utilised area, with abundant traces of cereals and cereal weeds (see Ballantyne below). Indeed, there seems to be something of a discrepancy between the rather scale of this latter deposit and the relatively modest character of the adjacent settlement features (i.e. Structure 1 and the F. 201 ditch).

Finally, human remains were found in the waterwashed sand deposits scattered alongside the palaeochannel in the northeastern quarter of the site,. These most probably relate to the later Iron Age occupation of the site, as indicated by their spatial association with three bone-weaving combs of this date. The interpretation of these human remains is challenging and they certainly warrant detailed analysis; while they could have been dispersed by river-action from ridge-flank graves, they may equally attest to ritual activities involving already disarticulated bone (as the four-holed skull recovered from the evaluation would suggest (see Dodwell below).

Distributional Patterning

In any discussion of the site's test pit results, the greater recovery rate of the sieved squares must be recognised; as is apparent in Tables 11 and 12, this clearly was considerable. While in the non-sieved squares pottery and bone both had mean values of 11 pieces, in the sieved squares this respectively rose to 32 and 34; in other words, the levels were approximately three times greater. This discrepancy is even higher for the worked flint. Having a non-sieved average of 18 pieces, in the sieved squares its average was 93 - more than five times greater.

Sum of quantity	BF	BN	FL	PT	Grand Total
Grand Total	2440	917	2873	916	7146
Max of quantity	171	151	234	66	482
Min of quantity	2	3	11	2	48
Average	*78.71*	*33.96*	*92.68*	*31.59*	*230.52*

Table 11: Sieved Test Pit finds densities

Using, in the first instance, only the values of the sieved, staggered-grid test pits and those deployed towards assessing artefact levels within the waterwashed sands around the ridge's lower northwestern flanks, a number of basic distribution patterns can be distinguished (fig. 21). First, is the generally complementary relationship between

pottery and bone, and the way in which this contrasts with that of the worked flint. The high-value swathe of the latter is almost entirely confined to the ridge's southern flank. There, values in excess of 50 flints per metre extended throughout *c*. 1130sqm, with there being a highest-range core - exceeding 151 flints per unit - across *c*. 250sqm. Of the pottery and flint, while in somewhat different configurations, they also occurred in not inconsiderable levels within the same area of the southern slope. However, their highest values - generally between 51 and 100 pieces per metre, but with occasional 101-150 'hotpots' - fall immediately adjacent to the Structure 1 roundhouse and must correlate with that building's occupation. (These directly building-related pottery and bone 51-100-piece high zones were considerable more restricted in their distribution than the southern 'high' flint zone, and only extended over 235 and 275sqm respectively.)

	BF	BN	FL	PT	Grand Total
Sum of quantity	6310	4053	9025	3535	22923
Max of quantity	116	139	129	136	139
Min of quantity	1	1	1	1	1
Average	*14.44*	*11.32*	*18.31*	*10.91*	*14.22*

Table 12: Non-sieved Test Pit finds densities

Otherwise, in these two categories, the most significant non-roundhouse zone hotspots coincided with the F. 214 'midden'. There, bone occurred in levels throughout of 101-150 pieces per metre (with a localised 151+ fragment 'high') and pottery generally had values of 51-100 sherds per square, but, again, with localised highs. (Note that these 51-100 sherd values continued within the ridge's 'fringe sands' east from F. 214 to the edge of excavation.)

It would be premature to now try to (over-) interrogate the subsequent-stage chequerboard sampling results, as their 'realisation' requires detailed individual finds-type (by category) analysis to do them any justice. Instead, at this time we will limit interpretation to only the most broad pattern comments (fig. 22). The crucial point here is, again, the distinction of the flint distributions, as opposed to the pottery and bone values. Whereas the former seem quite consistently high (but once more generally concentrating in the south of the ridge's grid/slope), the former all but mirror each other and with their higher values occurring through the northern and western portion of the grid-sampled areas.

This is reflected in Table 13's results of the 'chequerboard areas' (CBA 1-3) densities. Of these, whereas CBA 3, along the southern slope, had the highest average flint values (32 pieces per metre), the western grid, CBA 2, saw the greatest density of pottery *c*. 15 sherds ave.). The latter area also had considerable flint values (25 ave.); located on the crown of the ridge, CBA 1 saw much lower levels of worked flint and it was the only area where pottery and bone values exceeded the flint density (11/10 *vs*. 8 pieces respectively) and it did, indeed, see the highest bone values.

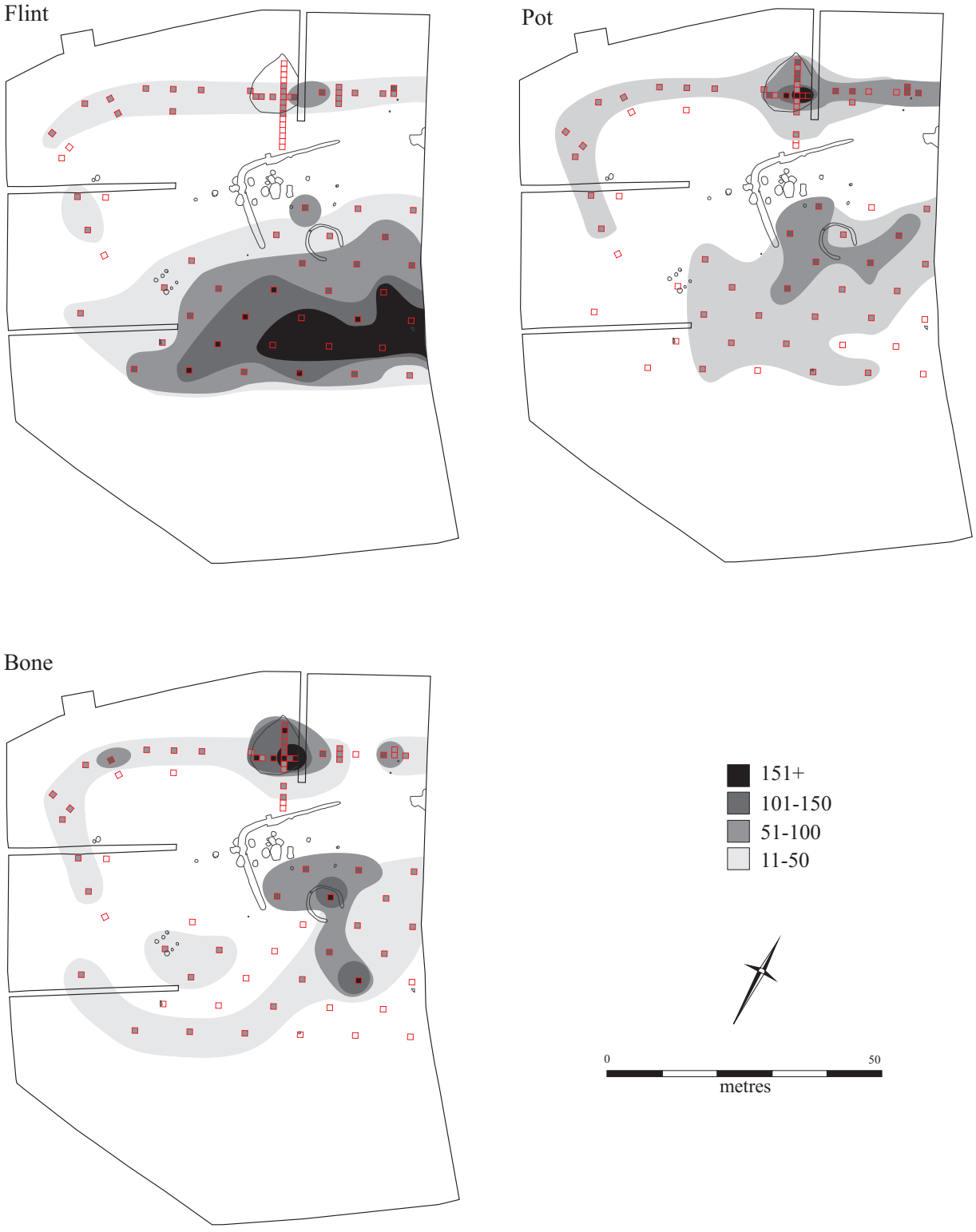

Figure 21.

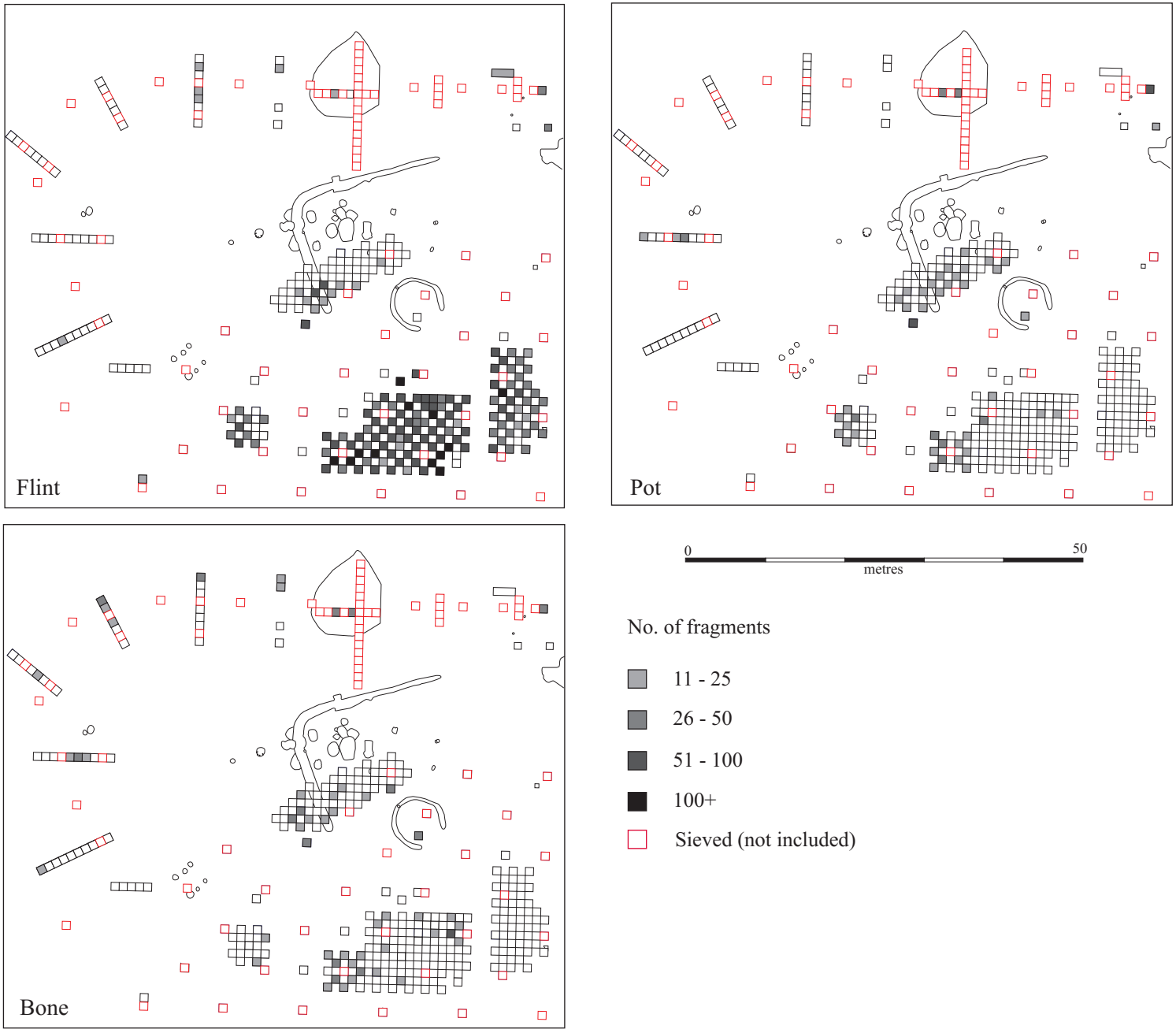
Flint
Pot
Bone
0
50
metres
No. of fragments
11 - 25
26 - 50
51 - 100
100+
Sieved (not included)

Figure 22.


Pottery
Neolithic
Beaker
Beaker 'spread'
EBA / MBA
0
50
metres
Lithics
Macehead
Arrowheads
Leaf-shaped
Chisel
Barbed and tanged
Blank

Figure 23.

'CBA' No.	BF	BN	FL	PT	WC	Grand Total
1	18.50	**9.98**	8.06	11.07		11.90
2	**25.17**	6.33	24.59	**14.75**		**17.71**
3	18.11	9.24	**32.04**	6.22	**1.00**	13.32
Average	*20.59*	*8.52*	*21.56*	*10.68*	*1.00*	*12.47*

Table 13: Chequerboard Area average densities (with grey-tone indicate greatest value by category; WC indicates worked clay)

Generally the 'chequerboards' saw much higher artefact densities than the ridge-flank transects (see Table 14; 12 *vs*. 7 finds per metre overall ave.). This being said, the three easternmost transects along the northern ridge-side (13-14) saw comparable levels and far in excess of the other transects. Indeed, Transect 13, bisecting the F. 214 'midden', had the highest bone densities of any of the sample units/areas (28 pieces per metre) and, at 10 pieces per square, its pottery values were just shy of the CBA 1 levels within the settlement core proper. In point of fact, Transect 15 actually saw the greatest average pottery values on the site (27 pieces ave.) and, also, the highest worked and burnt flint values of any of the transects (ave. 24 & 14 pieces).

Transect No	BF	BN	FL	PT	WC	Grand Total
7	3.80	1.75	2.50	3.80		2.96
8	1.67	2.78	2.64	2.67		2.44
9	6.07	7.19	3.94	6.06		5.81
10	2.71	7.36	2.50	4.50		4.27
11	3.13	9.53	2.56	3.20		4.61
12	5.79	4.13	4.41	2.73		4.26
13	10.04	**27.88**	7.24	24.27	**3.00**	14.49
14	10.17	11.14	7.76	10.54	1.00	8.12
15	**14.44**	11.58	**23.56**	**27.22**		**19.20**
Average	*6.42*	*9.26*	*6.35*	*9.44*	*2.00*	*7.35*

Table 14: Ridge-flank Transect average densities (with grey-tone indicate greatest value by category)

Certainly among the most pressing issues of the site's interpretation is what accounts for the extraordinary midden-like finds densities that occurred within the buried soil along the southern side of the ridge. Taken at face-value, its worked flint densities seem relatively straightforward and can be explained by its Mesolithic scatter. Yet, by drawing on the distribution of what few pre-Later Bronze Age sherds were recovered (see Knight below), it is apparent that other factors also probably contributed to this southern-slope lithics distribution. As is indicated in Figure 23, while Neolithic sherds were widely distributed throughout the south-centre of the site (and the Early-Middle Bronze Age pottery shows a propensity to a southward and eastern side-edge distribution), Beaker sherds only occurred scattered across the south-slope grid. Indeed, this distribution could suggest that a distinct occupation of that date also occurred within that area and which have surely have contributed to its lithics. Interestingly, though, the vast majority of the site's arrowheads also cluster within the area of the south-slope grid (including the two leaf-shaped ones, in close proximity; see fig. 23), with only one - barbed-and-tanged - occurring along the northern ridge-flank.

As has already been alluded to, in many respects *the problem* of trying to comprehend the site's sequence is coming to terms with the vast quantity of Later Bronze and Iron Age ceramics within the buried soil across that area. At this time we can only rehearse what might be the factors that could account for this; with the pottery of that period only analysed from just over 100 of the site's test pits (see Brudenell below), and knowing that there buried soil distributions - at least in the case of the later Bronze Age wares - continued eastward across much of the main Godwin Ridge complex, any definitive grappling with this issue will require detailed analysis of all of this material. Indeed, the challenges it poses is not unlike that of the other 'great' Late Bronze Age midden sites (e.g. Potterne and Runneymede; e.g. Needham & Spence 1997); in essence, how can so much material occur in such a depth of soil without having any obviously accompanying stratigraphy (floors, *etc*.)?

In this case 'the problem' could be relatively straightforward if it were not for the fact that the Structure 1 roundhouse (and the southern length of its associated enclosure) are clearly of Late Iron Age date and cut the buried soils. Otherwise, the 'disarticulation' of any strata within the buried soil could have been attributed to Roman agricultural practices (i.e. plough damage). However, by the site's house/enclosure 'datums', any such disarticulation must have occurred prior to the Late Iron Age. Now, on the one hand, and as noted above, a few feature fragment were distinguished within the test pit exposures and which suggest that (despite the negative evidence of the magnetic susceptibility survey) these distributions probably relate to some degree of *in situ* occupation (i.e. 'in' buried soil-zone). On the other hand, the preliminary analysis of the test pit's pottery indicates that, while the distribution of the Iron Age material is somewhat more localised than the later Bronze Age, it certainly occurred in considerable numbers and, in instances, equals or exceeds the later Bronze Age frequencies. Based on this one might be led to expect that any disarticulation of the strata took place during the Middle/later Iron Age; in other words, following its later Bronze Age usage and prior to the establishment of the (still 'articulated') Late Iron Age F. 201 enclosure and its roundhouse. In this regard, the casting of this issue is not abetted by fact that, due to their ridge-crown location, the seemingly Iron Age pitting cluster did not actually 'interface' with the buried soil - that horizon being ploughed-out across that immediate area - and, accordingly, we cannot know if they cut through that horizon or contributed to its 'mixing'. Yet, as will be fully addressed in the next report in the *Over Narrows* series, this explanatory scenario would not seem applicable to the Godwin Ridge East portion of the larger site. There, 'non-strata-ed' later Bronze Age midden-type deposits also occurred, but without significant Iron Age activity and, therefore, the latter cannot there have been the cause of the absence of its strata.

Unfortunately, due to the afore-stated reasons, we cannot usefully advance further this discussion at this time; except to hint that it is likely a combination of factors led to the formation of this finds-dense horizon - middening and a measure of *in situ* occupation - and, also, its subsequent disarticulation: pitting, soil-leeching and worm-/root-action, and perhaps a degree of contemporary horticultural activity.

Depositional Practices

As is highlighted in Brudenell's report below, that Late Iron wheel-turned pottery only occurred with the Structure 1 roundhouse (F. 200), its accompanying enclosure (F.201/204) and the F. 214 'midden' (and, otherwise, only pit/hollow F. 233) attests to their contemporaniety and association. This being said, that post-Conquest Romanising wares were only recovered in association with F. 214 indicates that, probably relating to its role in riverside rituals, it remained 'in use' for some decades after the settlement itself appears to have been abandoned.

As is apparent in the table below, given that only just less than a half of the roundhouse gully's circuit was excavated and, similarly, just a third of the enclosure ditch, these features yielded substantial quantities of material. Even if admitting a considerable residual component (see Brudenell below), it would suggest that it hosted 'occupation' as such and it was not some manner of token 'ritual-only' setting. Indeed, a pressing research issue will be to what extent the extraordinary quantities of material recovered from F. 214 deposits - *c*. 7,400 finds, including *c*. 3,960 animals bones and 2240 potsherds - related to strictly ritual deposition/'visitation', as opposed to refuse generated from the adjacent settlement. Whatever the case, it is noteworthy that, of the site's Iron Age features, it saw the lowest level of residual finds (14% see Table 27), which could indicate more direct deposition than within the settlement proper (i.e. less incorporation with earlier [sub-]'soil-set' material).

Feature	BC	BF	BN	FL	PT	ST	Grand Total
Roundhouse							
200	1	21	30	4	14	2	*72*
Enclosure							
201	3	40	76	31	66	6	*222*
203		32	81	21	55	7	*196*
204	1		55	1	76		*133*
Grand Total	*5*	*93*	*242*	*57*	*211*	*15*	623

As will be further explored below (see *Discussion*), there seems some discrepancy between the riverside ritual deposits and the ridge's 'modest' Late Iron Age settlement. Of the former, only the clutch of weaving combs (**see Riddler below <u>??</u>**) seem to potentially resonant with what would have been the 'lifeways' of its inhabitants (i.e. textile manufacture), whereas the brooches and horses appear imported to the site (see Haselgrove and Seetah below; figs 24 & 25). Based on this, it is equally conceivable that some of F. 214's pottery may also have been introduced in the course of ritual gatherings.

Finally, in this context, what of the human remains? Like the horse bone, none occurred within the settlement's features proper. While as noted by Dodwell (below) it is conceivable that the human skeletal parts may, in part, have derived from river-disturbed graves, given that one of the four skulls had symmetrically bored/drilled holes and another seems to have been burnt, this seems a rather too 'domestic' mode of interpretation and more gruesome scenarios may well have occurred (i.e. dismemberment of corpses comparable to the midden's horses).


Human skull
Human bone
Area of horse burials
Brooch
Roman pottery
Weaving comb
0
50
metres

Figure 24.

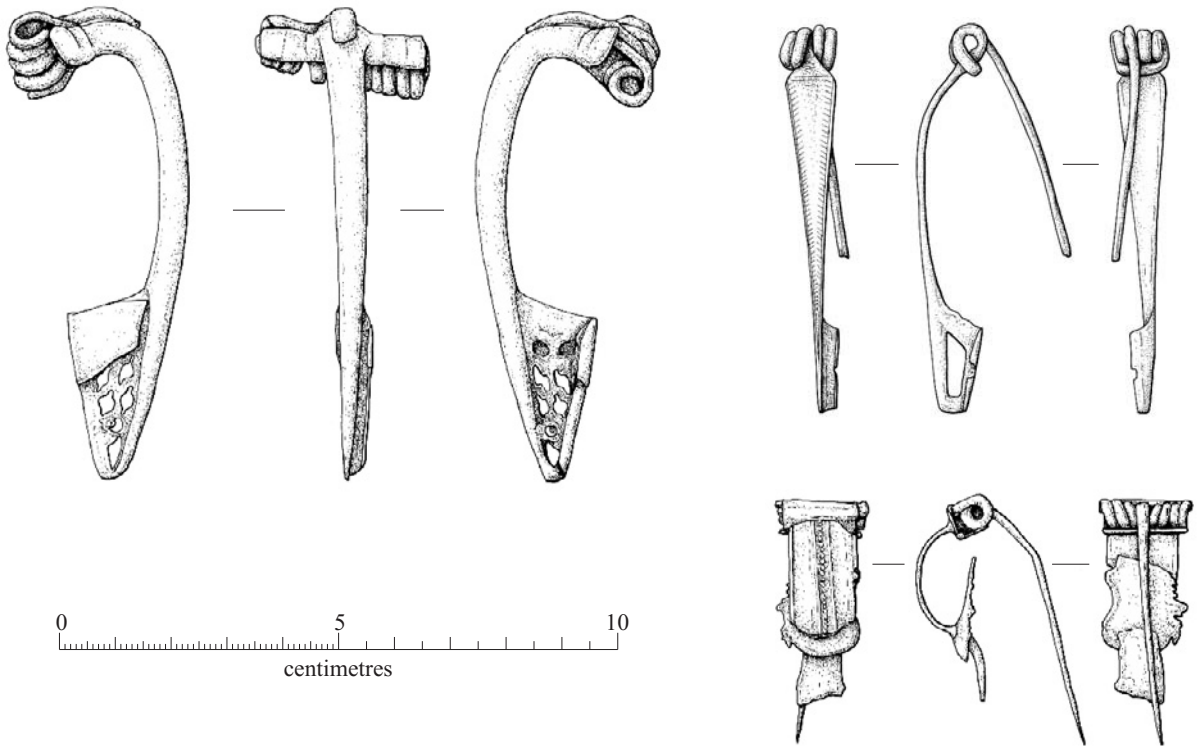

Figure 25.

Human Bone Natasha Dodwell

Disarticulated skeletal elements were identified in both test pits and trenches during the 2007 excavations (fig. 24). All of the disarticulated human bone has been scanned and an inventory of skeletal elements compiled with approximate ages and tentative sexing of elements where possible. This data is presented in tabular form below.

A total of 49 elements were recovered (refitting fragments of skull from a single context are counted as one element). Based on the number of skulls recorded (partial portions), this assemblage represents a minimum of four adults. No immature remains were identified. Where it has been possible to attribute a sex to a skeletal element, it is apparent that both males and females are represented.

The preservation of the elements was generally excellent, although many of long bones survived only as shafts, without their epiphyseal ends. This part of the bone is less robust than the shaft as it comprises of more cancellous, spongy bone and so is more susceptible to taphonomic processes. Evidence for possible animal gnawing was observed on the end of a humerus shaft. Most elements were smooth and stained a dark brown colour, presumably caused by contact with the peaty soil. Several, however, exhibited signs of weathering, flaking and cracking, possibly indicating a period of exposure or perhaps just a different burial environment.

With the exception of bone recovered from TP 16I, the disarticulated human skeletal elements are concentrated on the northern side of the ridge, on the edge of or in the fills of the palaeochannel (Trenches 106 & 114 and TPs 32, 84 & 101) and in the large 'midden', F. 214, which lay on the edge of the palaeochannel and from which three late Iron Age brooches were recovered.

Two skulls, comprising of the parietal and occipital portions were recovered from Trench 106 with a third skull from Trench 114. This latter skull had areas on its outer surface of a black, tarry material, which is possibly evidence of charring. Two right humerii were also recovered from this trench, one of which has cut marks that have been inflicted with a sharp blade and whose position suggests dismemberment/butchery. The drilled/bored human skull which was identified in 2001 (at the northern end of the evaluation Trench 260) was found between 5 and 10 metres from these skulls.

The human bone recovered from TP101 (right lower leg and ankle bones, left fibula and forearm, vertebrae, ribs and scapulae) and the adjacent Test Pits 32X & Y (vertebrae and ribs) almost certainly derive from the same individual. The disarticulated elements were found on the surface of the buried soil in a layer of wind-blown sand on the edge of the palaeochannel with a large quantity of disarticulated animal bone. It is conceivable that the human remains may represent a body that was left on the banks of the channel, (although the bones show no evidence of prolonged exposure) or that they have been washed out of a nearby grave; three weaving combs were recovered *c*. 3m away.

Skeletal elements recovered from Slot 3 in F. 214 (l. femur) and TP 44W (l. tibia and r. radius) may derive from the same individual.

In conclusion, the concentration and quantity of disarticulated human bone on the margins or within the palaeochannel, the evidence of dismemberment and possible burning of some of the elements (including the drilled human skull identified in earlier investigations), suggest that this place was a focus for ritual activity in the late Iron Age. All skeletal elements need to be examined microscopically for any further evidence of cut marks and animal gnawing and, the cut marks and burning/charring already observed on the humerus and skull from Trench 114 need to be described in detail. It seems likely that the large quantity (32 elements) of human bone recovered on the edge of the palaeochannel from Test Pits 32X and Y and the adjacent TP101 derive from a single individual. The positions of these bones were recorded on site and this plan should be examined with reference to the elements now that they have been identified. Finally, this small and important assemblage will need to be reviewed with reference to the faunal remains and other specialist data.

Test Pit	Co-ords	Context	Cat. No.	Elements	Comments
TP 16 I	974/2022	[966]	<1075>	adult l humerus (mid shaft).	from buried soil (possible gnawing
TP 32 X	986/2061	[587]	<1381>	x4 adult thoracic vertebrae & x1 rib shaft	0-10cm Schmorl's nodes
TP 32 Y	986/2060	[523]	<1398>	adult lower thoracic vertebrae	
TP 32 Y	986/2060	[523]	<1406>	x2 adult vertebrae (1 lumbar, 1 thoracic)	Schmorl's nodes They do not articulate
TP 44 W	965/2060	[880]	<1518>	adult r. radius shaft	From 'midden' F.214
TP 44W	965/2060	[883]	<1525>	adult l tibia, (mid shaft)	From 'midden' F. 214
TP 84 A	945/2060	[667]	<2473>	occipital ?male (partially obliterated sutures - middle/mature adult)	Cat. indicates human femur
TP 101	982/2059	[816]	<2951>	adult r. tibia, calcaneus & talus, l. & r. fibulae, 1.radius & ulna, l. & r. scapula (os acromiale), the r. acromian is larger than l. (but is slight evidence of fusion line so probably same individual) 2x thoracic vertebrae, l. & r. ribs (no=6)	from one individual. Assoc. or same as [831] & [832]. Vertebrae articulates with vertebrae from [799], SF 403 & 423

Table 15: Bone from test pits

Context	Catalogue	Trench	Elements	Comments
[1080]	<3252>		adult l. femur shaft	F. 214, Slot 3
[1087]	<3261>	TR 106	refitting skull fragments; l. & r. parietal & occipital of a middle/mature adult, l & r parietal & occipital of a younger/ middle adult (less suture fusion) ? female with wormian bones & porotic hyperostosis	two individuals
[1204]	<3341>	Tr 114	l. innominate (female), r. humerus (with septal aperture), re-fitting frags of adult skull (parietals & frontal), a 2nd r. humerus with totally different weathering to 1st (very abraded rather than brown/black & smooth)	cut marks on humerus and ?burning/scorching of the skull fragments. Two individuals
main area spoil heap	<3951>		adult r. parietal (sharpish sutures - ?young adult)	

Table 16: Bone from Features and Trenches

Small Find No.	Catalogue	Context	TP	Co-ords.	Element
4	<007>	surface		925/2035	adult r. tibia (gracile)
372	<544>	surface		940/2055	small frag of adult skull
399	<574>	[799]	101	985/2060	x2 lumber vertebrae
400	<575>	[799]	101	985/2055	?frag of sacrum
403	<578>	[799]	101	982/2050	adult thoracic vert (lower); articulates with a vert. from [816]
409	<584>	[799]	101		adult lumbar vert. with increased porosity on inferior body & marginal osteophytes
420	<595>	[799]	101	982/2050	adult thoracic vert. Schmorl's node
423	<598>	[799]	101	982/2050	adult vertebra, C7, articulates with a vert. from [816]
428	<603>	[809]	102	970/2060	adult, r. mandible, AMTL
493	<608>	[809]	102	970/2058	adult middle phalange
499	<614>	spoil heap			adult l. femur (minus head and condyles)

Table 17: Small Find bone record.

Material Culture

The site's finds assemblages are both important and substantial. One the one hand, the intensive sampling of its buried soils yielded over 4,400 pottery sherds and more than 10,700 worked flints. Yet, at the same time, significant 'singular' finds - or, at least, clutches thereof - were also forthcoming: the Iron Age weaving comb and brooch groups.

Worked Flint Lawrence Billington

A total of 10,718 worked flints were assessed. The vast majority, 10,540, derived from the buried soil test pit-sampling across the ridge. These were supplemented by 178 pieces recovered from the sand surface of the ridge following complete removal of the buried soil deposits. Cut features produced the remaining 465 artefacts. Although containing a significant amount of demonstrably later material the assemblage is clearly dominated by exceptional densities of Mesolithic flintwork. This report is based on a rapid assessment undertaken in order to coarsely characterise and assess the potential of the assemblage. Following some general observations on the composition and condition of the material, this report will consider the material from the buried soil and sand deposit in chronological order, with an emphasis on a characterisation of the Mesolithic material. The smaller assemblage from the features will be considered separately.

The condition of the assemblage is highly variable. A significant proportion of the assemblage is patinated, varying from a light blue through to heavy white patina. Patination is not a reliable indicator of relative date in this assemblage, artefacts diagnostic of both Mesolithic and later periods can be heavily patinated or appear unaltered and very fresh; subjectively it is felt that patination was rarer in the later material. Edge-damage is very common and a substantial proportion of the assemblage is broken (see Table 18). This reflects its provenance, largely derived from buried soil deposits that have been subject to considerable disturbance. All of the raw material is of flint which, in common with assemblages recovered from earlier work at and around Over, mostly appears to have been obtained from secondary deposits, probably from the gravel terraces of the Ouse in the immediate area (e.g. Middleton 2006). The composition of the assemblage is shown in Table 18.

Test Pit and Surface Finds - The Mesolithic Assemblage

Evidence for flint working practices and reduction strategies comes from the assessment of the cores and unretouched flakes from the assemblage. The types of core from the assemblage, excluding core fragments, are shown in Tables 19 and 20. The assemblage is dominated by cores showing clear traces of careful and structured working, with narrow flake and blade scars and trimmed and abraded platforms. These dedicated blade cores take several forms. The most common have removals from one platform only. Invariably worked in from one face there are no examples where flaking extends around the perimeter of the core, although they are often extremely well worked out. Related to these single platform cores are examples with a second set of short flake scars on the back of the core. Rather than relating to flake production these were probably struck to control the morphology of the core and facilitate its handling during knapping. Effective platform angles were frequently ensured by sloping the platform down towards the back of the core. The high number of opposed platform cores provide further evidence of structured blade production. These cores were worked in a similar fashion to the single platform cores, often with platforms sloping back towards the rear of the core and evidence of the careful trimming and abrasion of platform edges. The systematic flaking of opposed flakes and blades requires considerable skill and allows the knapper to efficiently correct knapping errors and maintain the morphology of the core as removals are made. Many of the

cores with two or more platforms also preserve traces of systematic blade production. These include cores with two or more narrow flake/blade platforms or, more commonly, multiple platform cores with more irregular flake scars overlying narrow scars belonging to an earlier stage of more formal reduction. Alongside the cores suggestive of systematic and skilful blade production are examples that appear more concerned with the expedient production of flakes regardless of morphology or core maintenance. Worked from one or more platforms these cores were struck further into the platform with little platform preparation, resulting in thicker more irregularly shaped flakes. Although some of these cores can be attributed to later activity on the site it seems likely that many are of Mesolithic origin, especially as similar, less formal, core reduction can be seen in the later stages of working exhausted blade cores.

Type	Test pits	Surface finds	Total
chip/chunk	2065	14	2079
broken flake	2664	38	2702
flake	3147	70	3217
broken blade	902	14	916
blade	954	15	969
bifacially flaked fragment	1		1
bifacially flaked implement	2		2
piercer/awl	5		5
scraper	120	4	124
microburin	7		7
microlith	95		95
backed bladelet	5	1	6
leaf shaped arrowhead	2		2
transverse arrowhead	1		1
barbed-and-tanged arrowhead	3		3
flint axe	1		1
miscellaneous retouched flake/blade	31	1	32
serrated flake/blade	4		4
notched flake/blade	7		7
burin	11	0	11
core tablet	28	2	30
other core rejuvenation flake	98	5	103
core rejuvenation flake scraper	2		2
core	323	12	335
core fragment	50	2	52
double ended scraper	4		4
tranchet axe sharpening flake	6		6
denticulate	2		2
Totals	*10540*	*178*	*10718*

Table 18: Worked flint from test pits and surface finds

Type	TP	SF	Total	%
single platform core	120	2	122	36%
multiple platform core	75	1	76	23%
opposed platform core	56	3	59	18%
two platform core	44		44	13%
irregular core	24	5	29	8%
discoidal/keeled core	2	1	3	1%
core scraper	1		1	<1%
core and retouched tool	1		1	<1%
Totals	*323*	*12*	*335*	

Table 19: Core types from test pits and surface finds

	irregular core	single platform core	opposed platform core	two platform core	muliple platform core	totals	%
blade scars	3	87	54	33	35	212	66%
flake scars	21	33	2	11	40	107	34%
Totals	*24*	*120*	*56*	*44*	*75*	*319*	

Table 20: Blade and flake cores from test pit and surface finds by type

The unretouched component of the assemblage provides complementary evidence for the structured techniques of working seen in the cores. Of the unretouched flakes 25% were classified as true blades. The blades invariably have abraded and trimmed platforms and display bending fractures, probably reflecting the use of soft hammers of organic material. The size of blades varies considerably from small bladelets to rare large pieces in excess of 100mm in length. Many of the secondary and tertiary flakes exhibit similar traits to the blades indicative of structured systems of working but others reflect more casual removals outside of formalised reduction sequences. Also present are large primary and secondary flakes representative of the early stages of core reduction. The frequent occurrence of chips and irregular chunks provide good evidence for flint working taking place on site. Many of the chunks would have been produced during the early preparation and testing of nodules whilst the chips provide evidence for the trimming and working of cores and implements. Notable here are tiny blade like chips probably resulting from the trimming of platform edges on blade cores.

Among the unretouched flakes are a considerable number of specialised core rejuvenation flakes, removals designed to remove errors or to correct platform angles on cores to allow flaking to continue. As well as flakes struck to remove the platform

of a core (core tablets) or to remove the flaked face of a core, many crested flakes and blades were included in this category. The vast majority of the crested pieces were unidirectionally crested and whilst some of these appear to be the product of trimming an existing platform edge, others are undoubtedly the result of formal cresting to initiate blade production at an early stage of core reduction. It is appropriate to mention here the presence of six distinctive tranchet adze sharpening flakes, typical of Mesolithic core tool technology.

Assessment suggests that all stages of core reduction are represented in the Mesolithic assemblage and demonstrates that, despite the general uniformity of the assemblage, various reduction strategies were employed. Whilst some cores were struck from one platform, others were carefully maintained to produce removals from opposed platforms, some cores were abandoned at a relatively early stage of reduction whilst others were carefully rejuvenated until utterly exhausted. Still others bear traces of less structured working; the expedient production of flakes from simple cores or abandoned blade cores.

Implements

A total of 304 retouched implements were recovered from test pits and surface finds, comprising approximately 2.5% of the assemblage, they are shown by type in Table 21. The Mesolithic and probable Mesolithic types are discussed here.

Type	**TP**	**SF**	**Total**
scraper	120	4	124
microlith	95		95
miscellaneous retouched flake/blade	31	1	32
burin	11	0	11
notched flake/blade	4		4
backed bladelet	5	1	6
serrated flake/blade	4		4
piercer/awl	5		5
barbed-and-tanged arrowhead	3		3
leaf shaped arrowhead	2		2
bifacially flaked implement	2		2
transverse arrowhead	1		1
flint axe	1		1
bifacially flaked fragment	1		1
core scraper	1		1
core and retouched tool	1		1
Total	*287*	*6*	*293*

Table 21: Implements from test pits and surface finds

Scrapers - Scrapers are the numerous implement in the assemblage. However, given that an unknown number probably post-date the Mesolithic occupation their predominance in comparison to microliths might be exaggerated. The types of scrapers are broken down in Table 22. End scrapers are most common with side scrapers and thumbnail scrapers relatively well represented. Other, more formal types are much rarer. Cross-cutting different types of scrapers is a general division between expediently produced scrapers, perhaps made and used on a single occasion prior to discard, and more carefully made pieces, of more formal morphology.

Type	TP	SF	Total	%
end scraper	70	1	71	57%
side scraper	12		12	10%
miscellaneous scraper	14		14	11%
thumbnail scraper	10	2	12	10%
end and side scraper	4	1	5	4%
double ended scraper	4		4	4%
disc scraper	2		2	2%
horseshoe scraper	2		2	2%
hollow scraper	1		1	<1%
side and hollow scraper	1		1	<1%
Total	*120*	*4*	*124*	

Table 22: Scrapers from test pits and surface finds

The more expedient forms of scrapers are often manufactured on broken or irregular flakes. Both hard and soft hammer flakes were used, most retained at least some cortex. Two core tablets (TP 4L and 12S) and a single platform blade core (TP 50S) expediently retouched as scrapers emphasise the relatively indiscriminate selection of blanks for informal scrapers. Irregular, expedient, scrapers are often a feature of Mesolithic assemblages (Butler 2005, 105-8), and were noted in significant numbers in the Late Mesolithic assemblage from Foulmire Fen, Haddenham to the north of Over (Middleton 2006, 49). Of the more formal scrapers a significant number of end scrapers were produced on blades, with very steep retouch and a sub-rectangular outline (e.g. TP 16D). One example was exceptionally small on a fine bladelet (TP 99E), whilst another was on a very large blade 98mm long (TP 16D). Two of the double ended scrapers were also produced on blade sections (TP 3A and TP 3W). Both were very short with steep retouch suggesting extensive resharpening and attendant reduction in size. Other formal scrapers were produced on completely or mostly cortical flakes (e.g. TP 4N). 12 scrapers were classified as thumbnail scrapers; these are best known for their Early Bronze Age associations, particularly with beaker assemblages, but are also a feature of Mesolithic assemblages. Assessment of this assemblage suggests the Mesolithic examples can be distinguished from later pieces by their very steep, abrupt, retouch and acute platform angle. On this basis the majority of the thumbnail scrapers from this assemblage are likely to be Mesolithic (e.g. TP 17G) with only one very probable Early Bronze Age example present (see below). The variety of scrapers and in particular the contrast between expedient irregular forms and formally made possibly curated items perhaps reflects their use in divergent tasks and on a variety of materials.

Microliths - Five microliths were present in the assemblage, all were recovered from test pits. Complete and recognisable examples have been divided into broad types following Jacobi 1978, as shown in Table 23. The assemblage is overwhelmingly dominated by obliquely truncated microliths with smaller numbers of other forms, notably rod microliths and isosceles triangles. Of the obliquely truncated microliths the majority are simple forms (Jacobi's type 1a) but there are rare examples with retouch on the leading edge (Jacobi's type 1b; e.g. TP 58Y, TP 57U) and one fine example with inverse retouch on its pointed base (Jacobi's type 11: TP 50M). There are also two examples of markedly diamond shaped microliths formed by an oblique truncation accompanied by extensive basal retouch (e.g. TP 54I). The affinities of these microliths will be considered in more detail below in relation to the date of the assemblage.

Type	TP	SF	Total
Obliquely truncated	82		82
Isosceles triangle	6		6
Rod	5		5
Unclassifiable	1		1
Scalene triangles	1		1
Totals	*95*		*95*

Table 23: Microlith types

In contrast to the large numbers of microliths there are relatively few microburins, seven in total. Similar proportions of microliths to microburins were noted in the classic fenland Mesolithic assemblage at Peacocks Farm, Cambridgeshire (Clark 1955). This discrepancy can partly be explained by experimental research that has demonstrated that recognisable microburins are not always produced when manufacturing microliths (Finlay 2000). The assemblage contained many proximal blade fragments which may have been the result of microlith manufacture. That some microliths were being made on site is attested by three notched blades that certainly represent unfinished obliquely truncated points (TP 57C, TP 61M, TP 54A). Some of the broken examples of obliquely truncated points may also represent breakage during manufacture.

Other Implements - Although scrapers and microliths dominate the retouched component of the assemblage several other pieces can be attributed to the Mesolithic phase of activity with varying degrees of confidence. Certainly belonging in the Mesolithic assemblage are six backed bladelets. The five piercers are also of clear Mesolithic character. Serrated pieces, often known as microdenticulates in Mesolithic contexts, are represented by four examples, all made on true blades. Serrated flakes and blades are also common in earlier Neolithic contexts and confidently assigning individual pieces to a specific period is very difficult. Bearing in mind the morphology and technological attributes of the serrated blades and their similarity to the other blades in the assemblage it is likely that most are associated with the Mesolithic activity on the site. The seven definite burins are characteristic of Mesolithic assemblages, the majority of these pieces were made on the distal end of broken flakes. Other retouched forms include two examples of abruptly truncated blades (TP 87A, TP 52H), and several flakes of Mesolithic character with limited edge retouch (e.g. TP 72A). The butt-end of a large bifacially flaked implement was recovered from TP 7H. With a narrow, angular, cross section and neatly trimmed end this artefact is probably the broken butt-end of a Mesolithic adze or axe, and together with the tranchet adze-sharpening flakes mentioned above demonstrates the presence and use of these tools at the site.

Dating

Dating of Mesolithic assemblages on the basis of flintwork has traditionally relied on a division between an Early Mesolithic dominated by simple 'broad blade' microliths forms and a later Mesolithic marked by the appearance of smaller geometric 'narrow blade' forms of microliths (Clark 1955; Jacobi 1976). As seen above, the site's assemblage is dominated by obliquely blunted points with much smaller numbers of narrow blade forms such as rods and scalene triangles. Conventionally, obliquely blunted points have been seen as occurring throughout the Mesolithic, becoming smaller in size and being complemented with other forms during the later part of the period. However, it has recently been suggested that obliquely blunted points are an exclusively early form and their appearance with later forms of microliths indicates a residual Early Mesolithic presence (see Kramp 2006). Straight forward dating of this assemblage is, therefore, difficult. It could be argued that the bulk of the assemblage is Early Mesolithic with a later component represented by the geometric microliths forms. Conversely, if we accept the conventional view that obliquely blunted and geometric forms can belong to a single phase of activity in the later Mesolithic the Godwin Ridge assemblage can be shown to have affinities with several other assemblages from the region. Firstly, comparisons can be made with the assemblage from Peacocks Farm, Shippea Hill in the southeast Fens (Clark *et al.* 1935; Clark 1955; Smith *et al.* 1989). The microlithic component of that assemblage has similarities with this site's material, including

a majority of obliquely blunted points accompanied by a range of geometric forms (Clark 1955, 7, fig. 2). Within the wider region a collection of microliths from Two Mile Bottom, in the Brecklands of Norfolk contains a similar range of forms (Jacobi 1984, fig 4.7, table 4.8). Such assemblages appear to be distinct from other collections in the region dominated by geometric forms, such as those from Lakenheath and Wangford (Jacobi 1984) and the possibility that they might represent a distinct early or transitional phase of the later Mesolithic may be suggested by the dating of the Mesolithic activity at Shippea Hill from around 8500BP (Smith *et al*. 1989). Conversely, there are several arguments for an Early Mesolithic date for some of the assemblage. First is the extremely marked predominance of obliquely truncated forms, which exceeds that of the assemblages mentioned above. Secondly, the metric analysis of a sample of 20 of the obliquely truncated points, presented in Figure 26, places them firmly in the size range for early forms as presented by Pitts and Jacobi (1979).

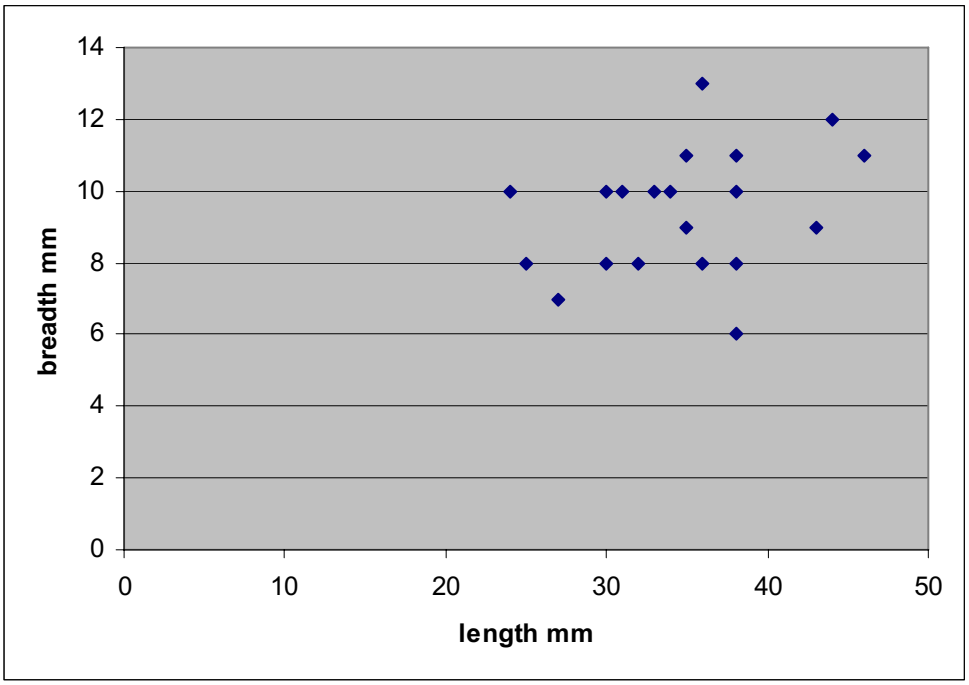

Figure 26: Length and breadth values for a sample of obliquely truncated points

Confident dating of the assemblage has proved difficult. Later forms of microlith are certainly present and comparison with other assemblages makes a date early in the later Mesolithic a possibility. However, as a preliminary statement, it may be wiser to assume a substantial earlier Mesolithic contribution to the assemblage. Further work on the assemblage including metric analysis of the debitage has the potential to contribute to the conclusions offered here.

Earlier Neolithic

There are considerable problems in identifying any earlier Neolithic material in the test pit and surface find material. Characterised by the continuation of systematic reduction strategies geared towards the production of narrow flakes and blades, a sizeable earlier Neolithic assemblage could effectively vanish within the Mesolithic material from the site. Isolation of earlier Neolithic activity must therefore rely on the identification of diagnostic implements. Two broken leaf shaped arrowheads were recovered from TPs 50A and 59B; these are the only artefacts that can be attributed to this period with certainty. Serrated blades are a significant feature of earlier Neolithic assemblages but it was argued above that the six examples above were more likely to be Mesolithic. Other implements diagnostic of this period such as laurel leaves and

polished axe fragments are absent. It would be simple to conclude that the contribution of earlier Neolithic material to the assemblage is negligible, with the arrowheads representing occasional visitation of the site perhaps associated with specialised tasks or activities. The possibility must remain, however, that a significant amount of earlier Neolithic flintwork remains unrecognised in the Mesolithic material.

Later Neolithic/Early Bronze Age

Later Neolithic and Bronze Age flintwork sees changes in core reduction methods and the appearance of diagnostic tool types that allows readier separation from the Mesolithic material that dominates the assemblage than is the case for the Earlier Neolithic. The problems of dealing with a palimpsest remain however, and it is rarely possible to isolate debitage of this period at the individual artefact level.

Core Reduction and Debitage

Later Neolithic and early Bronze Age reduction strategies were generally concerned with the production of flakes with notably less concern shown for the maintenance of highly structured sequences of working than seen in earlier technologies. Cores reflective of these themes are present within the assemblage, showing few signs of formal rejuvenation and frequently having multiple platforms where the core has been rotated when a platform has become exhausted they reflect a purposeful but more informal approach to flake reduction. Above it was suggested that some of these cores probably reflected less structured Mesolithic flake production running in parallel with the production of regular narrow flakes and blades. However many of these cores are likely to relate to Later Neolithic and Early Bronze Age flint working. Examples include a pair of multiple platform cores from TP 54w and single platform cores from TPs 16F and 3S. Other forms of cores, probably worked to produce specialised forms of flakes, are present in small numbers; these are more certainly diagnostic of the period in question. Three cores show evidence for intentionally keeled platforms (TP 59F, TP56X and SF 271); one of these (TP56X) is a true discoidal core with a negative levallois flake scar. Geared towards the production of broad thin flakes this method of core reduction is especially associated with later Neolithic technologies. Two very small cores that appear to have been worked for the production of tiny flakes (TPs 4P and 7J) may represent a specific core type that has been recognised in early Bronze Age contexts with collared urn associations in the region (Beadsmoore 2005).

Some of the large number of flakes lacking technologically diagnostic traits are undoubtedly of later Neolithic or Early Bronze Age origin, but cannot be separated from the undiagnostic flakes present in the Mesolithic assemblage. Four broad, relatively thin flakes which have carefully faceted platforms are probably the products of later Neolithic keeled/discoidal core reduction (TPs 11A, 20J and 50A).

Implements

Arrowheads - Four arrowheads of this period were recovered from the test pits. One was a complete and very fine example of a chisel arrowhead (TP 20J) dating to the later Neolithic. The remaining three arrowheads were all barbed-and-tanged (TPs 56N, 57A, 84D). None were complete; two had a single barb missing and one was a fragment. Dating to the Early Bronze Age these artefacts often have Beaker associations. One of the near complete examples, from TP 57A, appears to have been made on residual material; its retouch can be seen to cut through the patina of the original flake.

Scrapers - It was noted above that some of the scrapers in the assemblage were likely to post-date the Mesolithic component of the assemblage. In many cases the scrapers are relatively undiagnostic but several exhibit traits that suggest a late Neolithic or early Bronze Age date. Two horseshoe scrapers with fine semi-invasive retouch from TPs 28A and 57G are probably of this date as is a finely retouched

fragment of a scraper that may have derived from a disc or horseshoe scraper from TP 58K and a thin semi- invasively retouched discoidal scraper from TP 58K. It was suggested above that many of the thumbnail scrapers recovered were of Mesolithic date; however, one example, from TP 94 has the fine retouch generally associated with Early Bronze Age forms of this scraper.

Other Implements - A variety of other retouched pieces, not strictly diagnostic but probably dating to this period were also recovered from the test pits. A flake knife with limited invasive retouch was recovered from TP 38J and three crude bifacially worked implements came from TPs 88C, 54S and 58C. Three possible arrowhead blanks, all broken, are included here although their forms could not be established (TPs 11A, 16A, 56L). These may represent the manufacture of arrowheads on site during this period. Finally, several retouched pieces potentially of later Neolithic or early Bronze Age date appear to have used residual Mesolithic material, with the retouch cutting through patinated flakes. One of these was a neatly notched flake from TP 8E, whilst two flakes retouched through especially heavy patina came from TP 50U.

Later Bronze Age and Iron Age

There is little evidence for significant amounts of later flint working in the assemblage. Pieces suggestive of later working, including crude, irregular cores and flakes with crushed platforms and other knapping errors are certainly present but in many cases these are likely to represent examples of careless or untutored core reduction from earlier periods. If these pieces can be isolated as a distinct later technology they represent highly expedient working with very little control over or concern with the size and morphology of removals.

Features

Of the 463 worked flints recovered from the features, 354 were recovered from the intensive sampling of the F. 214 ‘midden’ deposit on the northern side of the ridge associated with Iron Age pottery. The remaining 109 pieces were thinly distributed among the cut features on the site. The worked flint is listed by Table 24 below.

The relatively small amount of material derived from features is generally similar in character to the assemblage from the test pits and surface finds. Much of the material appears to relate to Mesolithic flint working with some evidence for LN/EBA activity. Very little of this assemblage is likely to be contemporaneous with the construction use or filling of the features, having become incorporated into features from the substantial surface assemblage on the ridge. Possible exceptions include the crude cores from the ‘midden’ deposits and scraper from ditch F. 201 which may conceivably be associated with the features in question.

Feature number	Feature type	chip/chunk	flake	blade	core rejuvenation flake	side scraper	end scraper	miscellaneous scraper	microlith	microburin	retouched flake	serrated flake	irregular core	single platform core	opposed platform core	two platform core	multiple platform core	core fragment	Totals
200	drip-gully	2	2																4
201	Ditch	10	17	2				1											30
203	Ditch	10	5	2	1														18
204	Ditch		2																2
205	Pit		1																1
206	Pit		1																1
207	P-hole		2																2
209	Pit	6	1	1		1													9
210	Pit	1																	1
211	P-hole	1										1							2
212	P-hole			2															2
213	Pit	1	2	1	1														5
214	Midden	62	231	34	3	1	3	1	2		3		4	3	1	2	3	1	354
216	Pit	1																	1
219	Pit	1	1	1															3
221	Pit	1	1										1						3
224	P-hole		5																5
225	P-hole		1																1
226	P-hole		2	1															3
227	P-hole						1												1
230	P-hole									1									1
231	Pit	1																	1
233	Animal den		1																1
234	Pit		2																2
236	T-throw	1																	1
237	Pit	1	7								1								9
	Totals	*99*	*284*	*44*	*5*	*2*	*4*	*2*	*2*	*1*	*4*	*1*	*5*	*3*	*1*	*2*	*3*	*1*	***463***

Table 24: Worked flint from features

The Midden (F. 214)

The 'midden' contained a large assemblage of worked flint, 356 pieces. The vast majority is thought to be residual, deriving from the buried soil deposits on the ridge. Mesolithic components are well represented by several blade cores, one with a single platform, one very well worked down opposed platform core and three with two or more platforms with flake scars overlying traces of narrow flake/blade reduction. Products of such cores are represented by 34 blades and three core rejuvenation flakes. A number of the unretouched flakes also exhibit prepared platforms and bending fractures suggestive of the structured core reduction familiar from the Mesolithic assemblage discussed above. Particularly diagnostic are two microliths, both obliquely blunted forms. Three of the five scrapers are of expedient form which, without being diagnostic, could well belong to the Mesolithic assemblage. Other components of the assemblage are suggestive of a later Neolithic or Early Bronze Age date. Many of the unretouched flakes lacking preparation appear to have been worked relatively systematically from one platform and could indicate core reduction in these periods. A single flake with a faceted platform

could reflect the reduction of a keeled core. Of the cores a number of single, two and multiple platform form suggest LN/EBA activity, showing relatively informal reduction strategies. One multiplatform example has a keeled pair of platforms suggestive of later Neolithic technologies. Two broken scrapers from this feature with fine semi-invasive retouch, one perhaps being a fragment of a horseshoe scraper; would fit most comfortably in an LN/EBA context. Several pieces can perhaps be attributed to later activity, possibly during the later Bronze Age or even being directly associated with the maddening activity. Three irregular flake cores show some of the hallmarks of later flint working, with crushed platform edges and cones of percussion well in from the platform edge demonstrating poor control over the flaking process, with no concern over the morphology of removals. It is particularly notable that two of these cores were made on a coarse yellow flint of poor quality. This raw material was conspicuously absent from the rest of the assemblage and its presence here may suggest a decline in the care taken over raw material selection in later periods in parallel with the decline in reduction methods.

Drip-gully, F 200

This feature produced only two chips and two flakes, all undiagnostic but very probably deriving from the existing deposits on the ridge.

Enclosure/boundary Ditches

Features 201, 203 and 204, forming a recut ditch sequence adjacent to drip-gully F. 200, produced 50 worked pieces, 20 of which were undiagnostic chips or chunks. Two blades from F 201 and two blades and a core recovery flake from F 202 certainly attest to a residual Mesolithic component. Five of the flakes from F. 201 have prepared platforms and regular flake scars also indicative of Mesolithic core reduction. The remaining flakes are undiagnostic but an irregular scraper from feature 201 with crude retouch cutting through the patinated surface of a flake reflects the expedient use of lithic material already present on the ridge, conceivably being broadly contemporary with the features.

Pits and Postholes

These features formed a discreet grouping within and around ditches F. 201, F. 203 and F. 204. Together, they produced 42 struck flints of which 14 were undiagnostic chips and chunks. Most features contained only a few pieces, only F. 209 and F. 237 producing more than five worked flints each. A large amount of residual Mesolithic material can be inferred from the five blades recovered from Features 209, 212, 213 and 219 and the core rejuvenation flake from F. 213. A retouched flake from F. 237 and serrated flake from F. 211 are of likely Mesolithic date, although an earlier Neolithic origin for the latter cannot be discounted. The remains of the assemblage comprised of undiagnostic pieces and whilst there is no material demonstrably later than Mesolithic some of this material may reflect later activity.

Sub-rectangular Structure

The postholes from this structure (F. 224-27) produced just ten worked flints between them, the diagnostic pieces being limited to a single Mesolithic end scraper, manufactured on a narrow tertiary flake, from F. 227. A single blade from F. 226 and the prepared platforms and morphology of several of the flakes suggest the bulk of the material is of the same date.

Discreet Features

Posthole F. 230 contained a single worked flint, a microburin. A by-product of the production of microliths, this is undoubtedly associated with the Mesolithic activity on the site, although it probably derives from the dense buried soil deposits rather than dating the feature. Two natural features were also recorded. Tree-throw F. 236 contained two undiagnostic chips, whilst animal disturbance F. 233 contained a single flake struck from a multiple platform core.

In conclusion, the Godwin Ridge West scatter is exceptional for the density of worked flint recovered from its buried soil and sand deposits. The worked flint distribution is the only reflection of earlier prehistoric activities that did not involve the digging of cut features. Simultaneously, the later prehistoric features on the site do not seem to have made any significant contribution to the surface lithic material. The test pit and surface find assemblage poses the usual interpretative dilemmas when dealing with a palimpsest of activity. However, it is clear that a substantial Mesolithic assemblage is overlain by lower densities of later Neolithic and Early Bronze Age flintwork. The varied types of tools from the Mesolithic assemblage give the impression of a 'balanced' assemblage (Mellars 1976), with activities involving a wide range of group members, as opposed to specialised activities or visits, although the relatively low retouched component of the assemblage (2.5%) indicates the importance of flintworking itself as a key activity on the ridge.

The subtle variability in reduction strategies within the assemblage probably reflects shifting temporal rhythms in the working of stone on the ridge, perhaps related to raw material scheduling and task specific activities. This emphasises that the Mesolithic assemblage, rather than being a discreet entity, is itself a palimpsest, reflective of numerous discreet events of varying duration and character played out in a specific and significant location in the landscape.

As one of the largest assemblages of Mesolithic flintwork yet recovered in the region the potential of further detailed analysis should be emphasised. Very large mixed earlier Neolithic and later Mesolithic assemblages have been recovered from the Soham and Ramsey environs deeper in the Fens (Edmonds *et al*. 1999), but the Over assemblage would seem to be more comparable with rarer assemblages of Mesolithic material, perhaps somewhat earlier in date and lacking a substantial Neolithic component as at Peacocks Farm, Shippea Hill (Clark 1935; Smith *et al*. 1989), Cottenham (Conneller 1998) and Haddenham (Evans & Hodder 2006a). The large sample of microliths and other implements together with the excellent representation of reduction strategies offers a very rare opportunity to explore spatial and temporal patterns at the intra site level as well as the sites relation to the wider Mesolithic fenland and the problematic issues surrounding the dating of such assemblages.

Prehistoric Pottery Mark Knight

A very minor assemblage of earlier prehistoric pottery came from non-buried soil contexts. Five features produced ten sherds weighing 47g (MSW 4.7g). Of these, eight pieces were identified by fabric alone whilst two pieces were decorated in ways that made them identifiable as early forms (a whipped-cord impressed Peterborough Ware neck fragment and comb-impressed Beaker sherd both from [621] in F.201). Plain body sherds of Neolithic/Bronze Age type were located in F.204 (2 sherds, 5g), F.208 (1 sherd, 8g), F.214 (1 sherd, 5g) and F.237 (2 sherds, 18g).

Test Pits

The buried soil produced 4437 sherds (23900g; MSW 5.4g) and was largely made-up of Late Bronze Age and Iron Age pieces (see Brudenell below). It also included a minute number of Neolithic and earlier Bronze Age sherds and these were identified by examining the assemblage bag-by-bag and extracting obvious diagnostic fragments. Essentially, sherds were selected if they had recognisable forms (rims, collars *etc*.), decorative schemes or distinctive early fabrics. The process was partially hampered by the fact that much of the Late Bronze Age material was made of a fabric seemingly indistinguishable from the familiar Early Neolithic flint-rich fabric (Pollard in Evans & Knight 1997). Certain sherds were much easier to distinguish, such as profusely decorated Beaker fragments and characteristic grog tempered sherds of the Early Bronze Age category. Altogether this report represents a 'best-guess' estimation of the number of earlier potsherds recovered from the buried soil.

Sherds	Early Neolithic	Peterborough Ware	Grooved Ware	Beaker	Food Vessel	Collared Urn	EBA	Deverel-Rimbury
No.	5	10	1	17	2	7	32	5
%	0.11	0.22	0.02	0.38	0.04	0.15	0.72	0.11

Table 25: Breakdown by number and percentage of total assemblage.

A total of only 79 earlier prehistoric sherds were identified. Of these, nearly half belonged to the 'Early Bronze Age' category whilst the second biggest group was Beaker (thin-walled, comb-impressed decoration). A small number of definite Early Neolithic sherds were also documented on the basis of characteristic rim forms (out-turned, externally thickened *etc*.); Deverel-Rimbury sherds were recognized mostly by fabric (soft and shell-rich or 'corky').

Overall, the earlier prehistoric pottery represented just 1.8% of the total collection and individually none of the recognisable types could be described as significant assemblages (all equalled less than 1%).

Later Prehistoric Pottery Matt Brudenell

180 sherds (1573g) of pottery were recovered as surface finds from the top of the buried soil (Table 26). The proportions of dated material are broadly similar to that in the test pits. The only notable difference is the higher frequency of Late Iron Age and Romanized ceramics.

Date	No. Sherds	Weight	% by count	% by weight
Later prehistoric	19	60	10.5	3.8
LBA	68	504	37.8	32.0
LBA or EIA	2	26	1.1	1.7
MIA	45	470	25.0	29.9
LIA	21	385	11.7	24.5
Romanizing	25	128	13.9	8.1
TOTAL	**180**	**1573**	**100**	**100**

Table 26: Quantification of pottery from surface finds

Features

The excavation of features yielded a total of 1642 sherds (11298g) from 24 separate features, including ditches, pits, post-holes, gullies and a 'midden' (though for the immediate purposes of this report only approximately half of the sherds from the latter were examined). With the exception of a few contexts - namely the F. 214 'midden' deposits - all the pottery was highly fragmented; a fact reflected in the relatively low mean sherd weight (MSW) of 6.8g. The pottery dates from the Late Bronze Age (*c*. 1100-800 BC), later Iron Age (*c*. 300 BC – AD 50) and immediate post-Conquest period (*c*. 43-70 AD). A small number of residual sherds may belong to the earlier Bronze Age, and where present, these are noted in the text. No definite Early Iron Age sherds were identified, though the possibility remains that some of the Late Bronze Age material may in fact belong to the to the earliest Iron Age (*c*. 800-600 BC). It is more likely, however, that some of the plain Late Bronze Age pottery is Early Neolithic in date, potentially that from Tree-throw F. 220.

In a conventional pottery report, the spot-dated ceramics from each period would be isolated and discussed individually, normally through a description of the phased feature-based assemblages, coupled with some statement of the general character and date of the material. The nature of the assemblage makes this straightforward procedure extremely problematic owing to the exceptionally high degree of sherd residuality. For instance, of the 24 features with pottery, 19 contained burnt-flint tempered sherds typical of the Late Bronze Age. Most, however, are found in associated with ceramics of clearly later date. It seem unlikely therefore that any Late Bronze Age feature-phase can be identified with any certainty, despite most features containing between 35-70% Late Bronze Age sherds (by weight). Even in the three features containing Late Bronze Age material exclusively, the possibility must remain that these are residual.

Feature No.	Type	No. Sherds	Wt (g)	MNV	% Late Bronze Age (by wt)	No./Wt (g) Scored	No./Wt. (g) Combed	No./Wt. (g) Wheel-turned	Date
200	Drip-gully	7	27	2	67%		1/12	1/1	LIA
201	Ditch	60	264	6	62%			1/19	LIA
203	Ditch	49	243	4	65%	1/8			Later IA
204	Ditch	72	212	9	47%	3/23		4/17	LIA
205	Pit	4	5		60%				Later IA
208	P-hole	1	8		-				Later IA
209	Pit	37	151	3	60%				Later IA
210	Pit	13	60		100%				LBA?
213	Pit	64	251	2	94%				Later IA
214	Midden	1154	8857	98	14%	28/510	20/381	270/1720	LIA & Conquest
218	Pit	42	332	4	19%	7/26			Later IA
219	Pit	8	37	3	68%				Later IA
220	T-throw	4	64		100%				LBA?
221	Pit	5	63	2	35%				Later IA
223	Burrow	6	41	2	49%				Later IA
224	P-hole	3	7		-	1/2			Later IA
225	P-hole	4	27	1	67%				Later IA
226	P-hole	2	10		-				Later IA
227	P-hole	1	2		-				Later IA
228	P-hole	1	1		-				Later IA
231	Pit	16	93	2	68%				Later IA
233	Pit	16	166	2	40%			1/25	LIA
234	Pit	1	9		100%				LBA?
237	Pit	72	368	9	55%				Later IA
TOTAL		**1642**	**11298**	**149**		**40/569**	**21/396**	**277/1782**	

Table 27: Assemblage quantification with spot dates.

Earlier Bronze Age

Ten possible Early Bronze Age sherds were identified in the assemblage (47g), all bar one containing grog or grog and flint. Four of the sherds (11g) were recovered from Ditch F. 201, included two decorated sherds, one of which was a rim. The remaining plain body sherds were recovered from F. 204 (2 sherds, 5g), F.208 (1 sherd, 8g), F. 214 (1 sherd, 5g), and F. 237 (2 sherds, 18g). Except for the two decorated sherds in F. 201, the date of this material is by no means definite.

Late Bronze Age

A total of 560 sherds (2630g) were assigned to the Late Bronze Age, representing 34.1% of the assemblage by sherd count, but only 23.3% by weight. The difference in count and weight is explained by the fragmented and abraded nature of most Late Bronze Age sherds, with 91% falling within a small size category (<4cm in size), and the remaining 9% within a medium size category (between 4-8cm in size). The poor condition of the sherds is also indicated by the very low MSW of 4.7g. Burnt-flint tempered sherds dominate the assemblage (94% by weight), with a small percentage of sherds with shell (2%), sand (1%), flint and grog (<1%), and vegetable inclusions (<1%).

Based on the minimum number of different rims and bases present, the Late Bronze Age assemblage comprises fragments of 35 vessels (33 different rims, 2 different bases), on which only four retained shoulders. These included a fragment of a Class I tub-shaped coarseware vessel, similar to Hill Form L in 'Midden' F. 214 [940]; a fragment of a weakly shouldered Class I coarseware jar and smoothed round-bodied Class IV/V bowl/cup in Pit F. 237 [1106], and a marked shouldered Class I coarseware jar

with concave neck in Pit 231 [1145]. The latter is possibly an Early Iron Age form, and is tempered with a mixture of shell and sand, with some possible limestone inclusions. Decoration was extremely rare, occurring on just 11 sherds (59g). These included two separate finger-tip decorated rims (2 of the 33 different rims recovered), five different finger-tip decorated shoulder sherds, a further finger-tip impression on an unidentified zone, two sherds with grooved lines, and a smoothed shoulder sherd with two diagonal incised lines. Burnishing and careful smoothing of sherd surfaces was equally rare, though some no doubt had lost their surface through abrasion and burning (18 burnt sherds were identified). In total 28 (126g) sherds were burnished/carefully smoothed, representing 5.0% of the Late Bronze Age assemblage by count or 4.8% by weight. These figures are generally consistent with most Late Bronze Age assemblages from Cambridgeshire.

Later Iron Age and Immediate post-Conquest

1075 sherds (8629g) were assigned a date spanning the later Iron Age and immediate post-Conquest period (*c*. 300 BC - AD 70). Over half of this assemblage was handmade pottery in the Middle/later Iron Age tradition (775 shreds, 6444g). This pottery is not closely datable, and has a currency spanning over three and a half centuries. However, there are a number of characteristics that may suggest it belongs to the end of the later Iron Age rather than at the beginning; namely the relatively low incidence of scoring, the presence of globular, round-bodied vessels. The assemblage has been partially distinguished by its absence of features such as wheel-turned sherds (in both Romanizing and Late Iron Age fabrics), combed sherds, and flint-tempered sherds. It does, however, contain its own set of diagnostic features, included a range of typical slack-shoulder jars and round-bodies tub-shaped jars/bowls, together with a few Scored Ware sherds. The assemblage includes fragments of 79 vessels (64 different rims, 13 different bases, and 2 complete vessel profiles retaining rim, shoulder and base). The sherds account for 46.2% of the assemblage by count and 57.0% by weight, with a MSW of 8.3g. In terms of sherd size, 75% were classified as small sherds, 24% as medium-sized, and 1% as large (over 8cm in size).

The assemblage was dominated by Shelly fabrics (53%) and sandy wares (43%), with a small percentage of sherds with vegetable (2%), limestone (1%) or grog (1%) inclusions. 21 of the 66 vessel rims could be assigned to form (72 sherds, 1532g). These included 11 round-body neck-less tub-shaped jars/bowl (Hill Form K, 6 vessels; Form L, 5 vessels), seven slack-shouldered jars (Hill Form A, 5 vessels; Form E, 1 vessel; Form D, 1 vessel), two globular bowls with beaded or everted rims (Hill Form M, 1 vessels; Form N, 1 vessel) and an unusual globular jar with a highly constricted-mouth, and short off-set rim. This is perhaps a handmade version of Late Iron Age globular jars similar to Thompson Form B5-5. One of the Form L vessels from Pit F. 233 was decorated below the rim with two grooved horizontal lines and a grooved chevron pattern. This tub-shaped vessel is reminiscent of later Iron Age Saucepan pots in southern England; a very unusual form in this region. The two complete vessel profiles were both recovered from 'midden' F.214.

Decoration on the later Iron Age pottery was relatively rare. Only 40 sherds (569g) were scored, and the application was generally light, being most common on the shelly wares. By count this represents just 5% of the later Iron Age assemblage. In addition six of the 66 different rims had finger-tip or finger-nail impressions, or grooving. A small number of other sherds also had grooved lines, though these may be of Late Iron Age date (all being found in the midden).

The sherds assignable to the Late Iron Age 'Belgic' tradition include those which are wheel-turned (though not obviously Romanizing), and hand-made sherds with combing. These included 141 sherds (1279g) representing fragments of 17 vessels (12 different rims, 4 different bases and one complete profile with rim, shoulder and base intact). The sherds account for 8.6% of the assemblage by count and 11.3% by weight, with a MSW of 9.1g. In terms of sherd size, 64% of the sherds fell within the small size range, 33% were mediums-sized and 3% large.

The assemblage included 120 Late Iron Age wheel-turned sherds (883g), recovered from F. 200, F. 201, F. 204, F. 214 and F. 233. The sherds were mainly made with fine grog (40% by weight) or sand (39%), with a smaller percentage of very fine, almost gritless sherds with some shell flecking (22%). The 11 different rims were all everted or beaded, and all four bases had either beaded foots or shallow foot-rings. Some of the sherds displayed cordoned, rippled shoulder and grooved horizontal line. The single complete vessel profile belonged to a necked-bowl with an everted rim and foot-ring base. The form was very similar to the post-Conquest example, and is probably contemporary with it (deriving from 'midden' F.214). The remaining Late Iron Age sherds comprised 21 (396g) handmade combed sherds, all except one (5g) being manufactured with sandy fabrics. No diagnostic pieces were identified, though surface combing is common on Late Iron Age coarsewares, and is regularly applied to the shoulders and lower walls of medium and large-sized cooking and/or storage jars. In this area the technique may not appear until the beginning of the 1st century AD, and it is of note that only one combed sherd was found in a feature external to the F. 214 'midden' (gully F. 200). This may imply that this form of treatment was a very late addition to the Iron Age 'decorative' repertoire, and probably coincides with a declining application Scoring (of which there is relatively little in the assemblage).

The wheel-turned 'Romanising' pottery definitely assignable to the immediate post-Conquest period was restricted to the fills of the 'midden' F. 214 (being found throughout them). These included 157 sherds (899g), comprising fragments of 16 vessels (12 different rims, four different bases). The sherds accounted for 9.7% of the assemblage by count or 8.0% by weight, with a low MSW of 5.7g. This figure is probably reflects the thin-walled nature of the post-Conquest sherds, 86% of which fell within the small size category, with 10% being of medium size and 4% large. This assemblage was dominated by hard sandy wares (85% by weight) with a small percentage of fine, almost gritless sherds with some shell flecking (14%), and a few fine grog tempered sherds (1%). The rims were frequently everted and beaded, and some of the bases displayed foot-rings. In addition, a number of sherds displayed grooves, furrows, cordons and incised lattice lines. Diagnostic sherds included a lid and the partial profile of a necked, everted-rim bowl. The fact the rest of the pottery from the 'midden' was manufactures ether in the handmade Middle/later Iron Age tradition (include a small number or Scored Wares), or was wheel-turned in the Late Iron Age 'Belgic' tradition, suggests both may have continued to be made into the immediate post-Conquest period. Given this relationship, we should be cautious about dating the remaining features on the site too closely. Although none contain any post-Conquest material, some may still be contemporary, particular those that have Late Iron Age wheel-turned 'Belgic' pottery.

Test Pits

As a preliminary sample, the later prehistoric pottery from 102 of the site's test pits has been analysed (Table 28). Amounting to 1716 sherds (9901g), the material has been assigned to one of seven categories: Late Bronze Age (*c*. 1100-800 BC); Late Bronze Age to earliest Iron Age (*c*. 1100-600 BC); Early-Middle Iron Age (c. 500-300); later Iron Age (*c*. 350 BC-50 AD); Romanizing/ immediate post-Conquest period (*c*. 43-70 AD); Later Prehistoric (*c.* 1100BC -50 AD). The material was in a similar condition to that in the features, and was dominated by Late Bronze Age and later Iron Age pottery. By weight, these accounted for 75% of all material recovered from the test pits. The Late Bronze Age ceramics were found in 92 of the 102 sample test pits yielding pottery, whilst later Iron Age ceramics were found in 54. There was also a small, but significant, quantity of Late Iron Age handmade and wheel-turned ceramics, which occurred in 19 of the test pits.

Test Pit	Date		LBA		LBA to Earliest IA		E or MIA		Later IA		LIA		Romanizing		Later Prehistoric	
	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)	No. Sherds	Wt. (g)
TP103	22	253	13	119					7	68	2	66				
TP104	12	109	10	57					2	52						
TP105	54	580	15	206					24	229	7	80	7	48	1	17
TP112	2	16	2	16												
TP113A	2	23							2	23						
TP113B	1	8							1	8						
TP113C	4	17							4	17						
TP113D	6	43	2	9					4	34						
TP113E	5	16	1	3					4	13						
TP116	2	11	2	11												
TP11A	42	101	14	39					24	51					4	11
TP12D	2	5							2	5						
TP12J	3	26	3	26												
TP12N	3	34	2	31					1	3						
TP12S	2	8	1	1					1	7						
TP12X	7	64	5	34					2	30						
TP13V	11	98	7	60					4	38						
TP14A	37	193	13	51	2	17			20	115	2	10				
TP164	3	24	1	10					2	14						
TP165	5	37	4	29					1	8						
TP16A	14	58	9	41	1	3			4	14						
TP16F	1	15	1	15												
TP16I	2	14	1	4					1	10						
TP17A	60	195	39	143					20	46					1	6
TP17C	11	51	9	46					2	5						
TP17G	13	50	9	37	1	2			3	11						
TP17K	3	13	3	13												
TP17M	2	34	2	34												
TP17Q	6	34	5	33	1	1										
TP17S	8	70	2	7					4	55					2	8
TP17U	10	30	7	15					2	13					1	2
TP17W	13	121	13	121												
TP17Y	13	119	11	111			1	4							1	4
TP19A	46	175	32	140					14	35						
TP1A	37	160	28	133					1	4	2	14			6	9
TP20	8	33	7	26							1	7				
TP20J	4	25	3	19	1	6										
TP21B	10	96	6	38					4	58						
TP21D	45	282	36	232											9	50
TP21H	13	79	8	61											5	18
TP21J	10	143	9	139											1	4
TP21L	9	41	8	40											1	1
TP21N	20	117	19	115											1	2
TP21R	8	50	8	50												
TP21T	12	68	10	62					1	4					1	2
TP22A	17	81	14	67											3	14
TP22K	18	89	10	63	3	11									5	15
TP22Q	7	154	6	151											1	3
TP22U	20	155	16	131					1	18					3	6
TP22W	14	83	10	53	1	5	2	11	1	14						

TP24A	22	88	16	63	1	8									5	17
TP28A	21	117	8	63	3	26	1	13							9	15
TP28G	4	5	2	3											2	2
TP28X	2	22	1	4					1	18						
TP28Y	15	49	2	11					11	32					2	6
TP29A	14	45	9	34											5	11
TP31A	4	15	3	14					1	1						
TP32J	43	118	14	35					10	44	4	10			15	29
TP32O	46	320	4	23					34	273	8	24				
TP32X	49	202	11	18					38	184						
TP32Y	56	217	8	24					45	175	3	18				
TP33E	13	61	3	8					10	53						
TP33Y	9	22	7	16											2	6
TP35J	38	79	14	30					23	47					1	2
TP38J	10	42	7	34											3	8
TP38Y	32	163	7	29	1	4			16	89	2	20			6	21
TP39U	5	52							5	52						
TP39V	9	57	2	7					6	31	1	19				
TP3A	24	89	11	59	2	6									11	24
TP3M	2	6													2	6
TP3O	2	61	2	61												
TP3S	2	8	1	2											1	6
TP3W	2	15	1	6	1	9										
TP3Y	1	6	1	6												
TP41	17	98			1	1			16	97						
TP41O	50	302	22	72					26	221	2	9				
TP446	13	210							7	109	6	101				
TP44U	35	361	5	38					11	45	17	264	2	14		
TP44V	51	488	11	42					19	127	18	270	2	35	1	14
TP44W	63	463	13	83					9	72	40	303			1	5
TP44X	44	242	13	38					5	43	22	147	2	12	2	2
TP44Y	30	132	7	27					10	52	8	26	3	11	2	16
TP45K	138	659	31	117					68	241	16	64	20	228	3	9
TP4H	1	3													1	3
TP4N	1	6							1	6						
TP4P	2	22	2	22												
TP4X	2	5	1	2											1	3
TP56B	2	22	2	22												
TP58M	10	47	4	20											6	27
TP6A	45	180	31	142	2	5									12	33
TP7D	6	31	4	24											2	7
TP7J	6	46	4	40											2	6
TP85B	1	26	1	26												
TP85C	2	1	2	1												
TP86C	6	30	6	30												
TP87A	4	25	4	25												
TP8A	13	84	5	61											8	23
TP8C	4	8	1	2											3	6
TP8E	3	3	1	1											2	2
TP8G	6	53	3	21					2	26					1	6
TP8I	1	1	1	1												
TP9A	56	193	28	99					8	35	2	11	1	2	17	46
TOTAL	1716	9901	772	4348	21	104	4	28	545	3075	163	1463	37	350	174	533
% by no.			45.0		1.2		0.2		31.8		9.5		2.2		10.1	
% by wt.				43.9		1.1		0.3		31.1		14.8		3.5		5.4

Table 28: Quantification of pottery from test pits

Late Iron Age and Roman Pottery Katie Anderson

A small quantity of Late Iron Age and Roman pottery was collected from the 2007 excavation, totalling five sherds, weighing 102g. The assemblage included two South Gaulish Samian sherds (SF 59 and TP46W), although both were too small for any vessel forms to be identified. The fabrics suggest a mid 1st-2nd century AD date. A whiteware sherd (SF78) was also dated to this period. Two 'Romanising' black-slipped sherds were collected (SF55B and SF56B), comprising sherds which are Late Iron Age forms, but in Roman fabrics or vice versa. One sherd was from a jar with cordons on the neck and one from a bowl or jar, which also had a cordon. These vessels date approximately AD30-60.

Context	Fabric	No.	Wt(g)	Form	Date
SF59	South Gaulish Samian	1	6	Unknown	Mid 1st-2nd AD
SF56B	Black-slipped	1	36	Jar/bowl	LIA
SF55B	Black-slipped	1	21	Jar	LIA
SF78	Whiteware	1	34	Unknown	Early Roman
TP46W	South Gaulish Samian	1	5	Unknown	Mid 1st-2nd AD

Table 29: Late Iron Age and Roman pottery

The material was all found within a small area of the site, along the Goodwin Ridge, with most recovered from the 'midden' area. Although only a small quantity of material was recovered, it can be paralleled with the material collected from the 2001 evaluation (Monteil in Evans & Webley 2003), in terms of date and composition, with included one further South Gaulish Samian sherd. The pottery therefore suggests a Late Iron Age and early Roman presence in this area.

Metalwork Grahame Appleby

Eleven pieces of metalwork (four iron, seven copper alloy) were recovered from archaeological contexts during excavation and metal detecting. All of the iron pieces are related to Medieval or post-Medieval agricultural tools or machinery, with the majority of the copper alloy items scrap or non-diagnostic.

Copper Alloy

<004> (SmF. 3) - Thin regular copper alloy strip or band with irregular 'tear' at one end and lateral cut/snip at the other terminal (length 95mm, width 12mm, thickness *c*. 05mm, weight 4g). The surface condition, weight, parallel sides and thinness of this strip suggests this is a modern, machined produced piece of banding, similar to those used to secure crates and palettes; the irregular break is indicative of breakage under tension.

<006> (SmF. 4) - Curved, roughly triangular shaped fragment of copper alloy with one possible edge. The surface has a rough texture, pale green patina and some iron staining. In profile, this objects is very similar in appearance to a ceramic rim sherd; however, the fragment is insufficiently large to provide a positive identification and may simply be a distorted (deliberately broken down) piece of scrap from a large object.

<565> (SmF 393; grid 974/2032) - Small spheroidal, slightly biconical copper alloy object with a pitted surface and pale to dark green patina (dia. *c*. 7mm, height 6mm, weight <1g). Recovered as a surface find, this object is superficially similar to Bronze Age beads; however, there is no apparent

attachment points or evident perforation. Small and spheroidal in shape, this may be a pea for a crotal bell or similar; undated.

<605> (SmF. 490) - Slightly tapering thin copper alloy strip, band or sheet fragment with slight curvative. The surface has a pale grey green surface that is partially corroded, with mineralisation and concretions (deeper green in colour). The object has one clearly defined smooth edge and corner; dimensions (length 51mm, width *c*. 15.5mm–16.5mm, thickness 1mm, weight 7g). The quality of the edge and finish suggests this fragment is more likely to be of Romano-British date or (most likely) of later manufacture. However, an earlier data cannot be entirely excluded – undated.

<1691> Test Pit 48 ([571]) - Small very fragile fragments of copper alloy sheet (0-10cm; total weight <1g); undiagnostic.

<3405> F. 213 ([659]) - Three pieces of copper alloy. Two pieces of corroded and slightly bulbous copper alloy tube fragments with a brown to pale green surface patina (overall length 47mm, weight 4g). The second, larger object is a well-made semi-circular hollow piece of edging or banding with parallel, even side and a buff sandy patina. One end is broken with the other corroded and bulbous and of similar appearance to the other two fragments (length 39mm, width 6.5mm, weight 2g). Recovered from a pit cut by a ditch containing Middle Iron Age pottery (F. 203), a Middle Iron Age or earlier date is attributable to these fragments, notably the two smaller corroded pieces. The larger fragment may, however, be intrusive. Nonetheless, these objects represent skilled metalworking abilities, although identifying a function for these items is not possible.

<3020> Test Pit 45 ([591]) - Well-preserved copper alloy ring, with flattened oval cross-section and two grooves on the outer edge. The thickness of the ring narrows on one side (waist), possibly due to wear. The ring has a reddish brown patina with some green corrosion products adhering to the surface (ext. dia. 22mm, int. dia. 14mm, thickness *c*. 4.5mm, weight 7g). This ring is in remarkably good condition in contrast to the other pieces of copper alloy metalwork recovered from the site. As Coombs has observed, when discussing the rings found at the Power Station, Flag Fen Basin, that in identifying a use for them it 'seems futile to speculate on the myriad uses to which these rings could have been put, ranging from the purely ornamental to the functional' (Coombs 2001, 291). Nevertheless, the wear observed on the Over ring is indicative of either a long period of use, possibly as a baldrick, hanger or small terrett. Attributing a date for the ring is problematic and it can be assigned to any period from the Middle Bronze Age to the Roman period; however, a Middle to later Bronze Age origin is more likely on typological grounds.

Iron

<008> (SmF. 5) - Concreted tapering iron bar with rectangular cross-section (length 122m, maximum width 38mm, thickness *c*. 27mm, weight 197g); Medieval or post-Medieval.

<018> (SmF. 7) - Heavily corroded, round cross-sectioned iron rod. Several nodules of concretion/corrosion are present creating a 'bulbous' appearance; the rod is delaminating (length 287mm, diameter 8-12mm; weight 176g). Probable tine or similar from post-Medieval agricultural machinery.

<604> (SmF. 489) - Heavily concreted and corroded slightly tapering and curved iron bar with rectangular cross-section (an apparent transverse break is present at the narrower end; length 118mm, width 25-38mm, thickness *c*. 6mm-20mm, weight 156g). Fragment from a post-Medieval agricultural implement.

<3406> (SmF. 494) - Heavily corroded and concreted iron adze, with surviving wood traces within the haft and distinct waist (length 195mm, weight 945g); recovered from upper deposit of palaeochannel adjacent to F. 214.

Aside from the three brooches discussed below, the copper alloy metalwork is largely undiagnostic and undated. The fragments of tube and the ring, however, attest to high

quality metalwork either being imported to the area or manufactured nearby during the Bronze Age to Middle Iron Age. The wear-pattern on the ring also attests to objects that have had a relatively long-use period prior to deposition and may, thus, have formed part of a person's personal dress or items. Metallurgical analysis of the ring will narrow the date of manufacture.

Late Iron Age Brooches Colin Haselgrove

Three Late Iron Age copper alloy brooches were found in the excavations, all of them in the sub-circular 'midden' on the northern slope of the ridge (F. 214; figs. 24 & 25).

OVE 07 <014> (SmF. 6) - An almost complete Nauheim brooch (L.66mm). The tip of the pin is missing, but otherwise it is in very good condition. 4-coil spring with internal chord. The tapering, flat-sectioned bow has moulded edges and a rouletted strip right along each side. The trapezoidal catchplate is pierced by a single trapezoidal opening. Feugère (1985) Type 5a, cf 5a42. Dating: late second or earlier first century BC.

OVE 07 <001> (SmF. 1) - Thistle brooch (L. from spring to tip of pin 47mm). Pin and 8-coil spring are complete. The external chord is held at the head by a plain spring cover. The top part of the bow is a broad straight strip (12mm wide), with fine lateral and central mouldings, while the central rib rouletted. The base plate for the plaque is incomplete, but apparently of rounded shape, offset towards the head, and cast in one piece with the bow. The foot incomplete, but starting to splay out. Stead and Rigby (1989), Type Fa; Feugère 1985, Type 19. Dating: late first century BC or earlier first century AD.

OVE 07 <003> (SmF. 2) - Complete bow and spring of a heavy one-piece Colchester brooch (no pin), with a long, tapering, plain bow of rounded profile, sharply curved at the head (L. 81mm). The foot has elaborately fretted openwork. The brooch has a 10-coil spring with external chord, held by a long forward-projecting hook bent back from the head of the brooch. The spring is covered by wings, which appear to be ribbed, and has been repaired by inserting a copper alloy rod, held in place with solder. The catchplate is also broken and was mended with another piece of copper alloy soldered on the outside and bent round to form the catch. There is another ring of degraded copper alloy or corrosion on the outer side of the catchplate towards the tip. Stead and Rigby (1989), Type C. Dating: earlier first century AD, perhaps even late first century BC.

This is a small but interesting group of brooches. One-piece copper alloy Nauheim brooches of the type familiar from the continent with open catchplate, four-coil spring and internal chord (Feugère 1985) are rare in Britain, although some have been found, for example at Bridge and Barham Downs in Kent (Thompson 1982), Hayling Island temple, Hampshire – which has four definite examples (Haselgrove 2005, 389) – and Ketton, Rutland (Mackie 1993); iron versions also occasionally occur, as in the Westhampnett cemetery (Fitzpatrick 1997). Most British finds of related form have a boss on the bow and/or an external chord, more often than not with a two- rather than four-coil spring, features which mark them out as insular products (cf Stead 1976). The 19 British examples that have been analysed are nearly all copper alloy (Bayley & Butcher 2004, 145–146).

The *floruit* of the Nauheim on the Continent is during La Tène D1b (c 120–90/80 BC) and it would be very surprising if the Over example was any later than the mid first century BC. Due to their rarity in Britain, the odds are that it is an import, although we should bear in mind that the seemingly low numbers may have been further depressed because some genuine Nauheim brooches cannot be confidently classified

as such, owing to the absence of the catchplate, like the small example found in the Bryher, Isle of Scilly, cist burial (Hill, 2002–3).

The other two brooches are both representatives of the more elaborate types that took hold in Gaul in early Augustan times, from whence they soon spread to southeast England. Both varieties are well represented in the King Harry Lane cemetery (Stead & Rigby 1989), in use from the late first century BC until around the time of the conquest (Haselgrove & Millett 1997). Whilst thistle brooches are common on both sides of the Channel, the rounded bow of the Colchester brooch differentiates it from its Gaulish parent, which has a straighter bow; it is most likely to be British. Its large size (albeit within the normal range) and elaborately fretted catchplate suggest it belongs in the earlier part of the series. Thistle brooches are invariably made of brass, although occasionally with enough tin to qualify as gunmetal (Bayley & Butcher 2004, 150), whilst most Colchester brooches are also made of brass (*ibid*, 149).

In general terms, the brooches echo the date range of much of the pottery recovered from the midden.

Worked Stone Grahame Appleby and Simon Timberlake

Two pieces of worked stone, including one broken macehead, were recovered from features and test-pits. The small number of pieces prohibits any conclusions about the distribution of the objects from being drawn. Nonetheless, the discovery of a macehead highlights the presence of objects expressly designed for use in conflict or warfare, whether at a smaller, internecine level or much larger scale.

<611> (SmF. 496/[996]) - Recovered from the buried soil in TP4V. One half of an Ovoid macehead. The macehead possesses and elliptical cross-section with an hour-glass perforation, 21mm at the centre and 41mm on the outer surfaces. Dimensions: 88mm, width 50mm, diameter *c.* 100mm. This form of macehead has been identified with Grooved ware and Collared Urn sites, although the distribution of these is confined to the Thames and London region and northern and eastern Scotland (Roe 1979, 30). Fabricated from a natural rounded pebble, most probably a redeposited Bunter pebble (ex-Triassic Bunter Conglomerate); lithology is an orthoquartzite – metaquartzite. Such pebbles are fairly common as erratics within gravels.

<3248> F. 214 ([1024]) - Roughly shaped, three-sided fragment of stone, recovered from the 'midden' spread on the northern side of the ridge, measuring 120mm long, 33.5mm wide an a maximum of 25mm thick. The outer surface is convex, and shaped with a narrow strip *c*. 11mm wide that has been polished. Identification of this piece is problematic due to the nature of the deposit in which it was found; possibly a fragment from a cutler's pedal stone. Fabricated almost certainly from Culham Stone (variant), a locally specific Cretaceous Lower Greensand (glaucomitic calcareous sandstone with occasional dark lithic clasts) from Abingdon, Oxfordshire – probably quarried stone, rather than an erratic, used during the Romano-British period and later (Hayward 1999).

Antler Combs Ian Riddler and Grahame Appleby

Three single-sided simple combs of prehistoric date were recovered, one of which is complete, whilst the other two lack some of their teeth. The combs vary in their sizes, designs and decoration. The complete comb (<577>) has a circular butt-end with a central perforation and simple linear decoration of a saltire between single horizontal lines scored across it. The pattern is repeated just above the comb teeth. A second comb (<592>) has the same form of circular butt-end with a customary perforation, but its decoration is limited to a pair of horizontal lines set just above the teeth. The third comb (<588>) has a 'D'-shaped butt-end with paired framing lines around it, and a pair of horizontal lines just above the teeth. Two of the combs have fairly long teeth (>20mm in length), whilst the other set is noticeably shorter. There are either two or three teeth per centimetre and between seven and 12 teeth on each comb, which reflects the range at Danebury (Sellwood 1984, 371).

Prehistoric combs have been found in large numbers at Glastonbury Lake Village, Meare East and West, Maiden Castle and Danebury, but are known only in small quantities in East Anglia. They were briefly described by Rainbird Clarke, whilst Smedley ably summarised the combs from Cambridgeshire and Suffolk in 1961, describing and illustrating combs from Abington Piggots, Gog Magog, Haslingfield, Hauxton, Linton, Malton Farm Barrington and Wandlebury (Clarke 1939, 34 and fig 7; Smedley 1961). Subsequent discoveries include single examples of combs from Cherry Hinton, Nassington and Trumpington, as well as a pair of combs from Haddenham (White 1963-4; Tuohy 1999, vol. II, 39-40; Evans & Hodder 2006, fig 5.94; Mark Hinton, *pers comm*). The largest number of prehistoric combs to have come from any Cambridgeshire site to date is just three, seen at Over, the Gog Magog hills and Wandlebury. Within East Anglia, prehistoric combs cluster in the Cambridge area (Tuohy 1999, vol. II, fig 2).

There are some similarities of comb design within the Cambridgeshire corpus. Thus the Over comb with a 'D'-shaped butt-end and paired framing lines (<588>) is effectively a longer version of one of the combs from Abington Piggots, with the addition of a suspension hole (Tuohy 1999, vol. II, fig ABB1). Paired horizontal lines are the only decoration to be seen on the smallest comb (<592>) and occur also as the only patterns on both of the combs from Haddenham, one of which also has a circular butt-end, although it lacks a suspension hole (Evans & Hodder 2006, fig 5.94.2). The third comb (<577>) is difficult to parallel for its decoration, particularly as most saltire motifs utilise paired lines, rather than single crossing diagonals. A single line motif does occur above the teeth of a comb from Dumpton Gap in Kent, if set between paired horizontal lines (Tuohy 1999, vol. II, fig DUM1). The 'D'-shaped butt-end of one comb (<588>) is also an unusual feature. It was not noted by Tuohy, although it can also be seen on combs from Gussage All Saints, Maiden Castle and Rainsborough, as well as one of the combs from Wandlebury (Tuohy 1999, vol. I fig 7 and vol. II, figs GAS5, MAC4, RAI1 and WAN1). The circular butt-form is the most common for Cambridgeshire combs.

Prehistoric combs of this type extend in date from the late Bronze Age to the late Iron Age and there is, as yet, no chronology of their development. Sellwood noted that undecorated combs came from the earliest phases at Danebury, and the same can be said of Potterne, where the two combs of late Bronze Age date are both undecorated

(Sellwood 1984, 372-3; Seager Smith 2000, 228 and fig 92.45-6). Tuohy has summarised the dating evidence for her corpus but, as with Hodder and Hedges, has avoided any discussion of their chronology (Sellwood 1984, 372; Hodder & Hedges 1977; Tuohy 1999, vol. I, 102-3). Rather more has been written about their function. Sellwood elegantly summarised the possible options and added a consideration of wear patterns, as well as noting the curved section of many of the combs (Sellwood 1984, 377-8). In particular, it is often the outside teeth of the combs that have fractured, as seen with two of the Over combs. Whilst Sellwood related this wear pattern to use of the combs in weaving on a warp-weighted loom, Tuohy has suggested that they were actually used to produce narrow strips of textile braids or webbing. In terms of the warp-weighted loom, they would only have been needed for starting borders (Sellwood 1984, 378; Tuohy 1999, vol. I, 57). As weaving implements, they are likely to have been used by women and sometimes occur in pairs, suggesting that they might have been kept as sets, rather than individual items (Tuohy 1999, vol. I, 59-61). It is interesting to note, therefore, that two of the combs came from the same test pit; and they are the ones that fit well with a Cambridgeshire provenance.

<577> (SmF. 402) - The comb narrows from the tines to a rounded and flattened terminal, decorated with a saltire cross and horizontal bands. The head is perforated (*c.* 4mm diameter) where the arms of the cross intersect. The comb possesses seven tines, *c*. 30mm, long with a second identical decorative cross above item. Overall, the comb measures 120mm long and 33m at the widest point; weight 22g.

<588> (SmF. 413); TP 101 [799] - This comb measures 167mm long and tapers from the tines to a semi-circular head perforated at the centre (*c*. 7mm diameter). The head is decorated with two grooves, parallel to the edge of the piece and two horizontal bands across the base. Above the tines are two thin grooves, similar to <592> below. Three tines survive intact (*c*. 23mm in length) with two smaller, possibly worn tines (*c*. 20mm long), on one side; the other tines have broken off. The two smaller tines suggest that the comb was used in one primary direction of movement leading to unequal wear; weight 44g.

<592> (SmF. 417); TP 101 [799] - Well worn and missing three tines, this is the smallest of the three weaving combs recovered during the 2007 fieldwork. Overall, the comb is undecorated, with the exception of two thin bands above the tines. The comb narrows to a rounded head with a large central perforation (*c*. 6.5mm in diameter) and measures 115mm in length. The surviving tines are much reduced, measuring a maximum 12mm long; weight 29g.

Fired Clay Grahame Appleby

The quantity and fabric types of the fired clay recovered from test pits and features during the 2007 fieldwork varied from very friable orangey and sandy fabrics to highly fired, almost vitrified, reduced clay, with large flint inclusions with a deep red surface colour. The result of these differences in firing is a series of fragments that range from relatively soft and crumbly reddish to orange pieces (essentially 'biscuit') to highly fired and partially or wholly converted to ceramic. The vast majority of the fragments are undiagnostic, but appear to be mainly daub or structural in origin, although other potential uses, such as hearth lining, cannot be excluded. The possible presence of crucible fragments within the assemblage is attested through the recovery of several pieces that are highly fired and partially vitrified (further analysis of these as yet 'undiagnostic' pieces would be needed to confirm this).

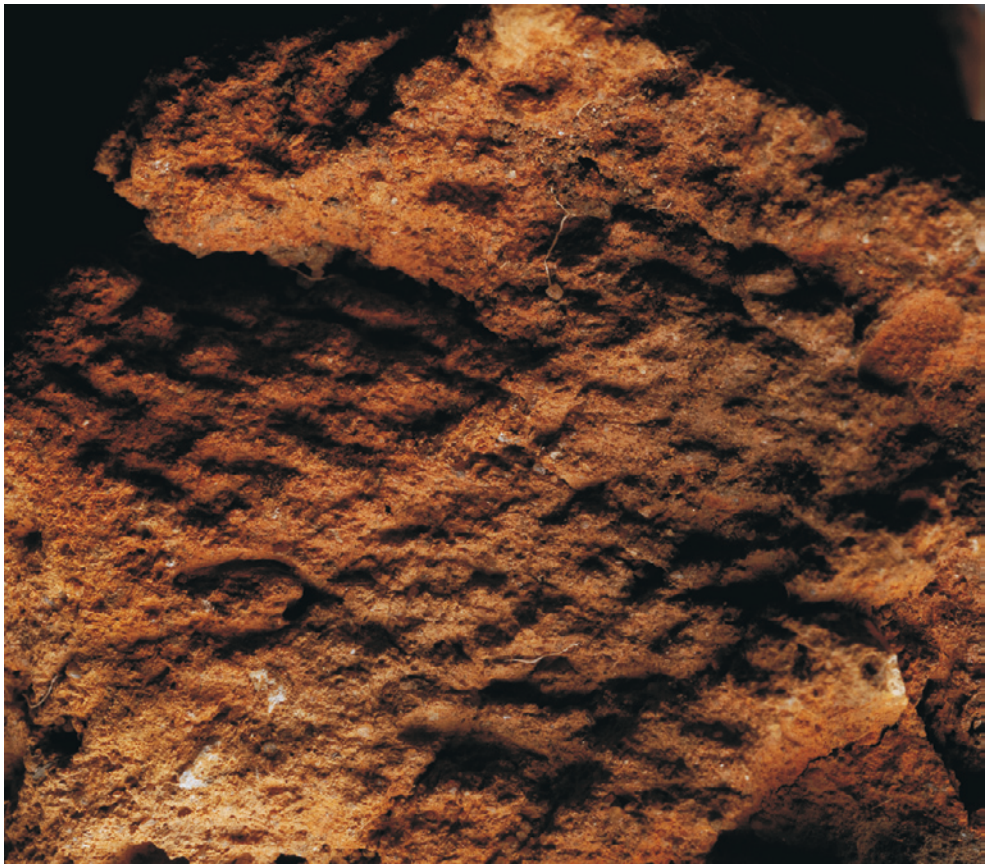

Figure 27.

One substantially complete triangular loomweight was found in a test pit (TP32X), with fragments from at least one other weight recovered from the nearby TP44U and 'midden' F. 214. A broken fired clay spindlewhorl was also found within F. 214, with a further fragment found in TP38Y. A piece of fired clay from TP56X, located in the 'main' grid, may also be a loomweight fragment. Of particular note is the large quantity of daub, consisting of 424 small fragments and weighing 4407g, recovered from Structure 1 (Fs. 224-229). Numerous pieces of the assemblage had clear wattle impressions with some also suggesting the use of split planks in its construction. Although not described in the selective catalogue below, these pieces most likely represent destruction debris from the six post-built structure found outside the main area of settlement activity.

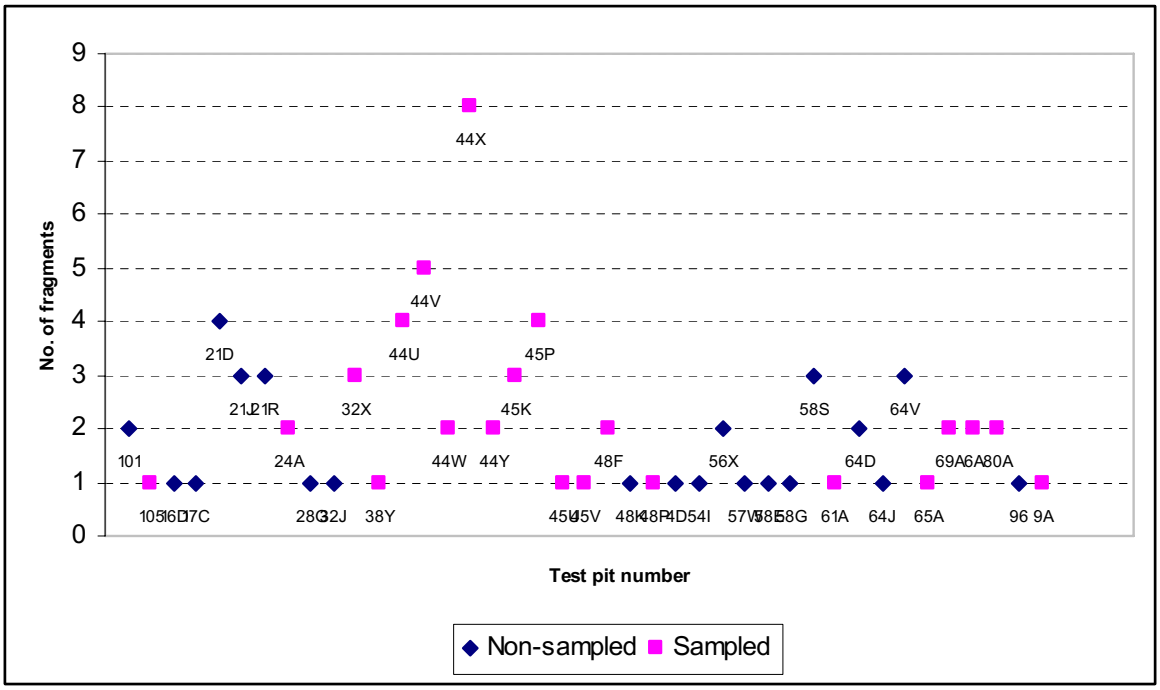

Figure 28: Recovery rates between sampled and non-sampled test pits.

The quantity of fired clay recovered from test pits, features and buried soil varied considerably, with a maximum recovery of 215 pieces from F. 226 (Structure 1), to single fragments. Of 48 test pits containing fragments of fired clay (83 pieces, 1729g), 21 were sampled (49 pieces; 1328g). Distributional analysis demonstrates there is no statistical difference in the quantities between those sampled and non-sampled (fig. 28); however; 60% by quantity and 77% by weight of the fired clay was recovered from sampled test pits. This difference in value reflects the sampling strategy and not the frequency of artefacts present; Test Pits beginning 32, 38, and 44-46 represent samples taken from F. 214 and adjacent northern palaeochannel edge.

The remaining fired clay fragments (40 fragments; 480g) were all recovered from features associated with the roundhouse (F. 200), 'L'-shaped ditch enclosure (F. 201) and the cluster of small pits found within and straddling the angle of the ditch, with 20 pieces, loomweight and spindlewhorl fragments (581g) retrieved from the 'midden' spread (F. 214). Examination of wattle impressions on structural daub from these features and Structure 1, where observed, suggest that these measured *c.* 15mm in diameter; insufficient flat surfaces survived to assess the width of split planks.

The clustering and association of these fragments and artefacts within and adjacent to the roundhouse is unsurprising and the presence of 'typical' Iron Age loomwieghts and spindlewhorls from the same contexts reflects weaving activity on site, further underpinned by the recovery of three bone weaving combs from the same area(s; see Riddler & Appleby above); three pieces of daub have fabric impression on them, all recovered from F. 226, Structure 1 (fig. 27).

Selected Catalogue

<1382> TP32X ([587]) - A light buff to blue grey colour, this is a substantially complete triangular loomweight; one side has 'shattered', but the edges survive on all three sides on the complete surface. The loomweight has been highly fired resulting in the object becoming fully ceramic and has numerous heat-induced cracks. A paler band is apparent along the medial planar surface indicative of differential heating, possibly due to the presence of a band of fabric. One complete apex survives with a 1mm diameter perforation. Deformation of one exit hole suggests a dowel was pushed through the finished weight prior to firing. This apex also possesses a smooth, concave 'rim' indicative of wear. Only partial perforations survive on the other corners. Weight 823g, length *c*. 118m, width/thickness.

<1454> TP38Y [513] - Possible fragment from a rounded spindlewhorl, with partially surviving smooth, exterior surface; highly fired and partially reduced, weight 5g, length 26mm, width 21.5mm.

<1504> TP44U [907] - Rounded corner fragment from a probable triangular loomweight with one flat planar surface. The outer surface has a pale buff brown to orange colour, with a dark grey and reduced interior. The fragment is highly fired; weight 65g, length *c*. 50mm, width 27mm.

<1908> TP56X ([886]) - Rounded corner fragment from a probable triangular loomweight with one flat planar surface and two shallow concave impression. The surface is pale buff in colour with orange mottles and is highly fired; weight 60g, length 48/50mm, thickness 40mm.

<3244>a 'Midden' F. 214 ([1024]) - Large irregular fragment with black interior (reduced) and pale brown/orange surface and is very highly fired. Possessing one larger flat surface, rounded corner and second surface, this may be a fragment of loomweight; however, the partially surviving perforation is rectangular (with possible bark impression), suggesting this may be structural, for example from a door or 'window' surround. Weight 99g, length *c*. 90mm, width 34-48mm, thickness (max.) 37mm.

<3244>b 'Midden' F. 214 ([1024]) - One half of a 'flattend' bun-shaped spindlewhorl with flat ends *c*. 25mm and 30mm in diameter. The surfaces are friable and powdery, black and possibly partially vitrified. The perforation is incomplete, measuring 6mm in diameter at the upper surface, terminating in a point; weight 5g.

<3254> 'Midden' F. 214 ([1080]) - Large fragment of triangular loomweight, with only one partially surviving planar surface and perforation, 14mm in diameter. The surface varies in colour from pale cream to light orange and dark grey. The fragment is very highly fired; weight 278g, dimensions – 61mm by 74mm by 85mm.

<3293> F. 224, Structure 1 ([1123]) - Highly fired, irregular fragment of daub with an orange to purple grey surface, slightly powdery. Recovered from Structure 1, this piece is included as it has a clear impression of a right-angled piece of wood, suggestive of the use of split planks in construction of the building, One other surface also possesses a flat surface with either wood-grain or bark impressions; weight 99g.

<3307> F. 226, Structure 1 ([1128]) - Three irregular lumps of fired clay, each weighing 23, 102 and 151g respectively. Recovered from a posthole feature, these fragments are all highly fired with orange to black surfaces and very powdery . They are included here as all three

pieces have clear textile impressions, notably the largest piece, possibly of a relatively close-weave tabby.

Waterlogged Wood Maisie Taylor

Much of the material appears to be debris of one kind and another. There are quantities of bark, for example, ranging in thickness from 3-40mm. This is not derived from one or two trees but from a number of trees ranging in size from sapling to fully mature. One piece from Trench 103, which is 18mm thick, still has a thin layer of sapwood attached. The range and size of pieces, and particularly the piece which still has the sapwood attached, suggests that this material is not necessarily derived from rotting trees nearby, but is more likely a by-product of wood-working, possibly timber production. There are some pieces of small roundwood and twigs, which might suggest that whole trees were being processed.

There is not a great deal of finished timber (note that one piece from [1206] is radially split and either trimmed or burnt square.) Almost all the material from Trench 103 is detritus from wood-working, probably from splitting tree trunks, and there are also 'off-cuts' from shaping.

Other than the small quantities of twigs, the rest of the roundwood is derived from coppice, ranging in diameter from 20-80mm, much of it trimmed. One piece from [1205] is a half-split trunk or branch *c*. 75mm diameter, which is very curved, partly hollowed and badly charred.

The only artefact, from [1204] is the base of a vessel (fig. 27). It is approximately 200mm in diameter with a chamfered edge. It is approximately 5mm thick at the centre with a slight indentation around`the edge. There is also a possible 'stitch-hole' near the edge. This base could be from a two piece or a stave-built vessel, but it is very rare and there are few pieces for comparison. Carved two piece vessels or tubs first appear in the Neolithic. The early ones sometimes have the bases 'sewn' to the body as at Wilsford (Earwood 1993, fig. 30), held in place by dowels (Earwood 1993, fig. 31.2) and finally, at some time between the 6th and 9th centuries BC, slotted into a groove cut in the body. Vessels made in this way continued in use but, during the Iron Age, it became more common to stave-build buckets and similar vessels. By the 3rd century it would have been commonplace to build vessels from staves rather than a single carved body. Few of these later ones survive as wood, but a number survive in the form of metal fittings.

The 'stitch-hole' might suggest that the vessel was of the early type, but as there is only one it is more likely to be a repair or possibly post-depositional. There is one similar piece from the east of England with which this base could be compared. Excavations by Archaeological Solutions on a site known as 'Broadlands' in Fengate, Peterborough in 2006 produced a closely similar vessel base. The example from Fengate is probably Late 3rd/4th century AD, and is 178mm diameter. The maximum thickness is 9mm chamfered down to 6mm.

The trees being worked on Godwin's Ridge were predominantly oak. This is very unusual on a fen or fen-edge site, because other species such as willow, poplar, alder,

hazel *etc*. tend to be more common. All the worked wood, including the vessel base and most of the coppice is oak.

Economic and Environmental Data

From various perspectives, the site's assemblages provide important contributions to the ridge's usage and changing economic basis. Having a substantial faunal assemblage, as will become apparent in relationship to the other '*Narrows* studies, essentially reflective of the unique late-phase usage of this point of the ridge, it is the only one of project's bone assemblages in which sheep dominate (MNI) and that horse is also significant. Beyond this, it also includes a considerable 'wild' component and fish also feature in some numbers.

Not being a feature-based archaeology (i.e. largely buried soil-derived), the results of its plant remain do not 'speak' quite so clearly as they do on the other sub-sites. They, nevertheless, provide crucial insights, particularly as regards the nature of the F. 214 'midden'.

Faunal Remains Krish Seetah

For the purposes of this assessment, totalling some 2622 'assessable fragments' the bone from all of the discrete features (including the F. 214 'midden') was examined, with those from 25 test pits looked at as a representative sample. Of these, 2111 were identified to element and species group (80%) and 1047 (40%) further identified to species. The medium and large mammalian assemblage was dominated by domestic species: horse, cow, sheep/goat, pig and dog – the horse component being particularly noteworthy and meriting separate discussion. Wild species were represented by aurochs, red deer, beaver, wolf and rat. For the size of the assemblage, birds were also relatively well-represented, particularly the wild component.

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Aging of the assemblage employed a combination of Grant's (1982) tooth wear stages and fusion of proximal and distal epiphyses (Silver 1969). Metrical analysis followed von den Driesch (1976). Elements from sheep and goats were distinguished, where possible, based on criteria established for the post-cranial skeleton by Boessneck (1969) and teeth by Payne (1985) and Halstead *et al* (2002). Identification of the assemblage was undertaken with the aid of Schmid (1972), Serjeantsen & Cohen (1996) and reference material from the Cambridge Archaeological Unit, the Grahame Clark Zooarchaeology Lab, Dept. of Archaeology, Cambridge and the Zoology Museum, Cambridge. Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident.

The assemblage was hand-collected and overall exhibited good preservation. Of 68 separate contexts studied for this site only seven where 'Quite Poor' or 'Poor' indicating that extensive weathering, bone surface exfoliation and other erosive damage had occurred to the bone. In contrast, 13 contexts showed 'Quite Good' or 'Good' levels of preservation, with a further 47 demonstrating 'Moderate' or 'Mixed' preservation. However, the actual overall state of preservation is best illustrated when we observe the specific numbers of fragments that these figures correspond to: some 1917 (73%) bones showed a level of preservation that was quite good/good, compared to 592 (23 %) bones that were quite poor / poor. Furthermore, thanks principally to the state of preservation, it was possible to record pathological

changes in detail. This was particularly relevant for the horse component of the assemblage. Although recorded in small numbers, butchery marks and other taphonomic conditions (which affected only seven percent of the assemblage as a whole) were clearly evident from this site and are discussed below.

Although the assemblage, as might be expected, had undergone a high degree of fragmentation, only a very small proportion – 31 individual bones (3%) – showed evidence of excavator-mediated damage.

Species Representation

The domesticates were overwhelmingly the most abundantly recovered fauna. Sheep were the best represented of the 'food species' within the context of NISP (Number of Identifiable Specimen) accounting for 235 fragments, or 22% of the overall identified assemblage (see Table 30). In contrast, cattle and pig were recovered in similar proportion: cattle being represented by 117 fragments (11%) and pig by 107 fragments, constituting ten percent of recovered material. The MNI (Minimum Number of Individuals) for these species was calculated as showing at least 14 sheep, the most abundant, and a count of five for both cow and pig. Of the non-food domesticates dog was represented by 26 fragments (2.5%) with at least two individuals present. Horse was the most surprising component of this assemblage with 492 fragments recovered, constituting nearly half (48%) of the identifiable faunal remains. This high fragment count is unrepresentative however as only four individual animals were calculated for the MNI count.

SPECIES	NISP	%NISP	MNI
Cow	117	11	5
Ovicaprid	235	22	14
Pig	107	10	5
Horse	492	48	4
Dog	26	2.5	2
Red deer	2	0.2	1
Aurochs	1	0.1	1
Wolf	1	0.1	1
Beaver	1	0.1	1
Corvus	1	0.1	1
Galliform	3	0.3	1
Anser	10	1	3
Wader	1	0.1	1
Goose	2	0.2	1
Rail family	37	3.5	6
Rat	6	0.6	2
Microfauna	25	-	-
Other Aves	26	-	-
Fish	147	-	-
ULM	474	30(Σ=1575)	-
UMM	392	25(Σ=1575)	-
UUM	511	20(Σ=2622)	-

Table 30: NISP and MNI counts for all sites and all species
Key: UMM & ULM = Unid. Medium and Large Mammal / UUM = Unid. Fragment. NB: Species percentages are out of 1047. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to Σ in brackets).

Wild Fauna

The richness of this assemblage is best evidenced from the non-domestic component. For the size of the assemblage wild species were proportionally well represented with large mammalian fauna such as aurochs, red deer and wolf present. Beaver and rat were also recovered, as where 25 fragments of microfauna that could not be assigned to species but where rat-sized. Surprisingly, despite the good preservation there were no amphibian bones recovered.

Birds and Fish

Birds were also well represented; the domestic component comprised both domestic water-fowl (*Anser*. sp) and chicken. Considering the period, Late Iron Age, the latter has to be taken with a degree of caution as this species purportedly arrived with the Romans. Goose was also present, which although found in small numbers (only two fragment recorded), might suggest that a range of water-fowl species were exploited due to the favourable local environmental conditions. In keeping with the likely environment of the Late Iron Age, water birds, particularly from the rail family, were recovered in significant numbers. Those that could be assigned to species were identified as coot, moorhen and night heron. A single specimen represented the wader family, although this could not be assigned to a specific species. Surprisingly, passerine birds, which are usually ubiquitous in any well-preserved assemblage that has other birds present, were absent.

As might be expected from a wetland environment, fish were recovered in substantial quantities; however, the majority of fragments, as is often the case, were spines and other unidentifiable parts. Of the elements that could be assigned to genus pike was the only clearly identifiable species.

Butchery

Cut marks were recorded in relatively small numbers with just three elements (0.1%) showing evidence of meat processing. Despite this small number, the butchery data indicated a variety of implements in use, all of which were metal, ranging from fine to large blades. However, there were no indications of chop marks from which we might infer the use of cleavers or axes.

Although the results from this investigation must be taken with caution considering that the majority of material has been hand-collected and sample-size does not extend into many thousands, there are still some interesting trends evident.

It is generally considered that sheep do not supersede cattle as the most significant economic species until later periods, certainly well into the Medieval. Although it is likely that cattle were still the main meat providers in terms of nutrition (taking into account meat yields) the fact that sheep were recovered in numbers three fold greater than cattle or pigs surely illustrates the economic significance of ovicaprids within the region. Unfortunately, the elements that have been recovered, whilst representative of the whole carcass, have not leant themselves to unbiased identification of whether the animals were sheep *or* goats. This is problematic only in the sense of giving a clearer notion of the economic and ecological situation of the site: are we dealing with environmental conditions favouring sheep husbandry (i.e. relatively dry with grazing) or goats (less specialised). Considering the quantities however, it is perhaps tempting to err on the side of sheep husbandry, despite the fact that the *anticipated* environmental conditions (a wetland ecology) would not favour this species. An explanation may lie in the results from the other two food species: cow and pig. Both occur in relatively similar numbers, in terms of fragment counts and minimum number of individuals; this is surprising as pigs are usually found in significantly smaller numbers than ovicaprids or cattle on most non-Roman sites. Furthermore, for all three

species, there are a relatively high number of juvenile animals for an assemblage of this size: this site was effectively drawing young animals from a wider catchment area. The bias towards young individuals (evidenced by un-erupted permanent teeth and unfused epiphyses of long bones) across all three main domesticates deserves further investigation. The presence of all elements, including head and distal foot bones, would potentially indicate that the animals were either brought in on-the-hoof or raised locally. Considering the specific environmental conditions, and nature of this assemblage, it is likely that the former was the mode of management. What is not clear, and what are conspicuously absent from this assemblage (for ovicaprids and cattle) are the old adults and senile individuals that one might expect in a meat-/dairy-orientated husbandry regime: the animals that are necessary to replenish stocks. Clearly, animals were slaughtered for meat, but the assemblage does not indicate 'husbandry' for meat. Certainly for sheep, the juvenile kill-profile would not indicate animals with a particularly high meat yield. Confusingly, nor does it point to the management of secondary products; the age structure does not support the exploitation of valuable commodities such as milk, or agriculturally important traction power.

Thus, the significant number of pigs (a meat-only species) indicates that they were not simply kept on site as 'walking garbage disposal units' and occasionally killed for the table, but were actually a favoured component of the diet. Additionally, the age profile of all three domestics, coupled with the lack of older animals and equivocal husbandry regime, points to a site where animals are brought for slaughter rather than raised. Furthermore, the age profile points to a specific mode of slaughter and processing, favouring juvenile individuals: suckling pig and spring lambs; however the cattle are older, not veal calves. This profile points much more to a Roman, rather than Iron Age (even Late), mode of faunal exploitation. Although the site might have been dated, by association to ceramics, to the Late Iron Age, the bone assemblage appears to reflect, at least in part, later occupation.

Addressing the other fauna, with the exception of horse, which will be discussed shortly, the presence of both beaver and wolf could suggest fur procurement, although one must be cautious as both these species were represented by just one individual element. The dependence on other wild fauna and aquatic resources does not seem to be significant. While the site is rich in terms of diversity, actual fragment or minimum number of individuals point to relatively little exploitation of non-domestic species. This is despite that fact that, as the assemblage indicates, wild species were certainly present within the region. One might expect this picture to change with further investigations of the site and its environs.

Exceptionally, this site has bucked an established trend in terms of the proportions of domestic mammals recovered. Invariably, sites dated to the Late Iron Age are dominated by either cattle or ovicaprids. Although there is increasing evidence to suggest that specific environmental condition may play a role in which of these two species dominates, for example wetter conditions favouring cattle which are less prone to foot rot, it is rarely the case that one or other do not dominate. It is surprising therefore that horse bones were more abundant than either ovicaprids or cattle, by a large margin, accounting for nearly half the assemblage. This is an interesting point and deserves further discussion. It would be a mistake to over-infer from what is effectively a small sample, particularly as it represents a low number of individual animals; however, the proportion of horse bones recovered is unusual as is the

condition of these bones. While it might be assumed that the horse was found in high numbers due to its economic significance as a beast of burden and for traction, this is not a clear-cut issue. It has been suggested that cattle, rather than horse, would have been the more important beast of burden until the medieval period when improvements in horse morphology led to larger more effective working animals (Langdon 1984). Indeed, metric data from this site indicates animals that were between 12 and 13.1 hands, which would have been small in comparison to later examples. Thus, the presence of horse needs to be taken in context, as it is possible that whilst they certainly could have been used to provide power, there may be another explanation for their presence.

There is no evidence to suggest preferential deposition of specific parts, nor is there butchery data to indicate processing for consumption. Certainly in later periods horse-knackering became an important craft specialism providing skins as well as meat for domestic dogs. However, when we look at the fragmentation of major limb bones of the domestic species (see Table 31) we see that horse bones are the least fragmented, with the highest quantity (15 elements) recovered as complete, unbroken units. Furthermore, some 16 separate records of pathological change were noted to have occurred on ribs, vertebrae, skull portions and long bones – effectively: diffuse porotic changes indicative of infectious change occurring at a number of locations around the body. This is combined, in marked opposition to the other of the domestic species, with an age profile (noted on teeth and from fusion data) indicating old/senile adults.

Thus, this assemblage, mostly corresponding to F. 214 (a large 'midden') would appear to have been the resting place of old horses that were disarticulated for ease of disposal or for skins / glue, but that were not fit for consumption. The high prevalence of bone infections would indicate animals that were not in particularly good health and were likely at the end of a long working life. As to the nature of their exploitation during this 'working life' we might look to the Babraham excavations where the region and its strategic significance may potentially provide an explanation. The area would have been particularly important for communication between road and river traffic and it is potentially the case that the more manageable (than cattle) horse would have been favoured for rapid transportation of light-weight goods and people.

% Complete	COW	HOR	PIG	SG
10	15	2	7	10
25	1		6	3
50	9	3	2	18
75	1		1	5
90	1	1	2	13
100	4	15	4	6

Table 31: Percentage completeness of major limb bones

Finally, in light of the evidence, we cannot rule-out ritual activity. The low level of fragmentation, combined with the fact that only one horse bone actually showed gnaw-damage, would suggest that the horse deposits are unlikely to be from knackering waste. Horse burials, whether of whole animals or portions, have been noted from Iron Age sites (Legge 1991; 1995) and given the pathological condition of the bone we are clearly dealing with animals that have limited 'value' in an economic sense. These individuals would also have had dubious food value: making them ideal candidates for sacrifice. It is all too simple to remove pragmatic considerations from ritual contexts when often the evidence portrays these as working in harmony.

Taking into consideration the bird component of this assemblage, and drawing indirect parallels with the avian component of the Snow's Farm shrine (Evans & Hodder 2006b) we see further indications of ritual activity. Assuming that the proportionally high fragment count of Rallidae family birds were not intended for the table, this reinforces the likelihood of a site showing pronounced ritualistic significance.

Environmental Bulk Samples Rachel Ballantyne

Fifteen bulk samples were submitted for analysis, comprising two profiles through the prehistoric buried soil, the F. 214 'midden' and four later Iron Age settlement features. All were flotation sieved using a modified version of the Siraf tank (Williams 1973) at the CAU. Flots (>300μm) and heavy residues (>1mm) have been dried and then sorted by the author using a Leica MS5 (x6.3 – x50) binocular microscope for flots, and by eye for residues greater than 4mm. The 1–4 mm residues have not been sorted at this stage, but kept for future reference. Full raw data is summarised in Tables 32 (buried soil) and 33 (later Iron Age features) at the end of this report. Nomenclature follows Stace (1997) for most plants; however for wheat and barley the traditional classifications in Zohary and Hopf (2000) have been followed.

Both waterlogged and charred plant macrofossils were present and there are low amounts of aquatic molluscs, small vertebrates, insect exoskeletons and artefacts. The settlement location thus appears to have been damp to wet, perhaps linked to seasonal flooding; the quality of waterlogging is accordingly variable, with orange iron (iii) oxide staining of items in the more shallow features and buried soil. The quality of charred plant remains is also variable, as items within cut features such as pits and postholes are in relatively good condition (little fragmentation and clear surface detail), whereas those from the buried soil and 'midden' layers are more frequently fragmented and with pitted surfaces.

Buried Soil

Seven samples have been analysed, representing a sequence of 10cm spits through buried soil contexts, [503] and [505], within grid squares 1G and 8G respectively. In both locations, the only clear pattern is that the concentration of charcoal gradually increases up the soil profile, which is probably the cumulative effect of human activities during the period of soil formation. Other charred and waterlogged plant remains occur in low quantities, with no clear spatial or temporal patterning.

There is no evidence of crop processing or other economic activities within [503], where the only charred plant remains are seeds of spikerush (*Eleocharis* cf. *palustris*) and black mustard (*Brassic nigra*). Both plants signify damp ground, and could be expected to grow naturally in the settlement environs – although they could also represent weeds of cereals grown upon damp land. Of more significance is the concentration of probable waterlogged seeds at 10–20cm depth in [503], which appears to represent a wet phase during the formation of this soil. The seeds of water plantain (*Alisma plantago-aquatica*), mints (*Mentha* sp.) and blinks (*Montia fontana* ssp. *chondrosperma*) all represent shallowly-flooded to damp land. Seeds of stinging nettle (*Urtica dioica*) and henbane (*Hyoscyamus niger*) indicate disturbed, nutrient-enriched soils, which would be consistent with settlement environs.

In contrast, [505] lacks any evidence of waterlogging other than one algae 'seed' (Charophyte oogonium) in the 10–20cm spit. This context also has good evidence of economic activities, with charred cereal grain and seeds of fat-hen (*Chenopodium album*), a common arable weed and a food in its own right. The few cereal grains are poorly preserved, so identifiable only as barley (*Hordeum vulgare* ***sensu lato***) and wheat (*Triticum* sp.).

Midden F. 214

Two samples from [1024] and [1080] have produced broadly similar results, with numerous waterlogged wild seeds and a mixture of charred cereal grain, chaff and wild seeds.

[1080] has slightly better waterlogging, with the many seeds of crowfoots (*Ranunculus* subgen. *BATRACHIUM*), common butterwort (*Pinguicula vulgaris*), water plantain, pondweeds (*Potamogeton* spp.), common club-rush (*Schoenoplectus* cf. *lacustris*) and algae all pointing towards an aquatic environment – probably open (unshaded), shallow water. Other well represented plants are of disturbed, nutrient-enriched soils, notably stinging nettles, fat hen, henbane and elder (*Sambucus* spp.) that probably grew along the margins of this wet area. [1024] has a similar range of plant types, but in lower numbers, and includes duckweed (*Lemna* sp.) and rushes (*Juncus* spp.), suggesting the water may have been shallower at this location.

There are low numbers of charred barley and wheat grains, some of which are identifiable as 6-rowed hulled barley (*Hordeum vulgare* ssp. *vulgare*) and spelt wheat (*Triticium spelta*); the wheat identification has been confirmed by the presence of spelt wheat chaff. The wild seeds represent plants of disturbed and/or damp land, and so could represent weeds of cereal crops. With only individual cases of each taxon, the range is too low for ecological analysis but includes seeds of similar size to cereal grain, such as mallow (*Malva* sp.) and rye brome (*Bromus* cf. *secalinus*), that would have been difficult to remove during crop processing.

Posthole F. 215 and Burnt Pit F. 218

The results from these two features are very different. Posthole fill [659] F. 215 has single poorly-preserved charred grains of wheat and barley, with no cereal chaff and few seeds. Of the charred seeds, most (four) are of common club-rush – a semi-aquatic plant that would be very unlikely to grow as an arable weed. Single possibly waterlogged seeds of pale persicaria (*Persicaria maculosa*) and water plantain show that this feature may have been subject to seasonally wet conditions.

Pit fill [1103] F. 218 contains good charred and waterlogged plant remains. The charred plants are dominated by cereal grain, with nineteen barley grains that when well preserved are hulled, and two of emmer wheat (*Triticum* cf. *dicoccum*). Another twelve grains are too poorly preserved for identification. The chaff comprises six wheat glume bases, of which four are clearly emmer wheat –

thus confirming the grain identification. Many of the wild seeds occur as single examples for each taxon, and represent both arable and wetland environments. The only taxa that occur in quantity are all arable weeds, notably seven seeds of fat hen and four of black bindweed (*Fallopia convolvulus*). Taxa more characteristic of wet land than arable are represented by one seed of mint and one of meadow rue (*Thalictrum flavum*).

The waterlogged seeds in pit F. 218 are much fewer than those from 'midden' F. 214, but are closely comparable in their range of species – nettle, fat hen, and water plantain, with very low numbers of henbane, common butterwort and elder seeds. The range suggests damp to wet ground that may have been flooded seasonally.

Structural Postholes F. 224 and F. 227

The richest charred plant remains within this assemblage have been recovered from posthole [1123] F. 224, which is dominated by cereal chaff and wild seeds – a crop processing by-product. The other three samples, from posthole fills [1124] and [1130], have comparable remains in much lower quantities due to their very small soil volumes (all less than 1 litre). The results for [1123] are thus discussed in more detail below, as the other samples from this structure may be regarded as smaller sub-samples of the same assemblage. A few waterlogged seeds of fool's watercress (*Apium nodiflorum*) and water plantain in [1123] are the only evidence for flooding or raised water-table in any of the postholes at this location.

The majority of charred cereal chaff in [1123] is of spelt wheat with fifteen glume bases and three spikelet forks, and a further 21 items too poorly preserved to identify to wheat species. The presence of hulled six-rowed barley is confirmed by one well-preserved rachis internode and twisted, hulled grains. Curiously, although the majority of chaff in this context is spelt wheat, most of the grain is barley – suggesting that at least two different materials or charring events may be represented.

The charred wild seeds in [1123] are dominated by small to grain-sized types of arable weeds that were common during the Iron Age and Roman periods in Britain (*cf.* Jones 1988), notably rye brome, scentless mayweed (*Tripleurospermum inodorum*), small-seeded vetches/wild peas (*Vicia/Lathyrus* spp.), black bindweed (*Fallopia convolvulus*), black medick (*Medicago* cf. *lupulina*), docks (*Rumex* spp.) and mallows. A small number of the taxa are semi-aquatic, and so unlikely to be found upon arable; water dock (*Rumex hydropathalum*), common meadow-rue and common club-rush. Burdocks (*Arctium* spp.) grow upon damp land, but are perennials that do not tolerate cultivation and so are very unlikely arable weeds. Some other species favour damp to wet ground, but could perhaps tolerate arable, particularly at its margins, such as common spike-rush and sedges (*Carex* spp.). The very mixed range of ecologies represented suggests, in line with the contrasting cereal chaff and grain taxa, that this charred assemblage represents a variety of plant materials.

The range of charred plant remains from this stage of excavation at Over is dominated by cereals and likely arable weeds. Species represented are hulled six-rowed barley and spelt wheat in several contexts, with emmer wheat only from burnt pit F. 218. Emmer wheat tends to be found more usually in Neolithic to early/Middle Iron Age contexts in East Anglia, although there is much overlap with the transition to the cultivation of spelt wheat during the later Iron Age to Roman period.

Of note are the few charred seeds of common club-rush in 'midden' F. 214 and posthole F. 215, a semi-aquatic plant that could not tolerate arable conditions; not all the charred seeds in the assemblage may have been arable weeds from crop processing. It is likely that a wetland resource is also represented partly by the charred plant assemblage, such as from thatching or strewing.

The frequent incidence of waterlogged and mineralised aquatic biota (plants, molluscs, micro-organisms) across the sampled contexts shows that many parts of the settlement were intermittently flooded. The most notable waterlogged remains are in F. 214, from which an open, shallow (perhaps a few centimetres) body of slow-flowing to still water may be surmised. The extremely good preservation of artefacts reported from this area may well due to the underlying soft wet mud that artefacts would have fallen into, and the relative lack of trampling or weathering associated with such a burial process.

The above reconstruction does not preclude describing F. 214 as a 'midden' as the shallow water body may also have been deliberately targeted as a locus for refuse. It is striking, however, that no evidence of waterlogged food waste survives (fruit stones, pips, cereal chaff) as might be expected in a midden. The relatively few charred plant remains are very similar to those found in other sampled settlement features, suggesting general surface debris in F. 214 rather than a structured deposit. Finally, the range of waterlogged seeds in F. 214 includes many plants that thrive upon heavily fertilised land (notably fat hen, nettles and henbane), which consistent with the margins of a heavily settled area – either due to repeated occupation, or a relatively high density of humans and kept animals.

In conclusion, although a small assemblage based upon only fifteen samples, these results provide an important addition to understanding of Iron Age settlement and subsistence within the East Anglian Fens. The ranges of cultivated and wild plant taxa in both the charred and waterlogged assemblages compare particularly well to those published from nearby Haddenham (Jones 2006; Hunt 2006). The plant remains from Wardy Hill (Murphy 2003) are less comparable since, firstly, its charred plant assemblage was much more diverse in cereals and wild seeds and, secondly, it had no true waterlogging in any sampled context.

No further work is required upon the plant remains analysed for this report. Interpretation of the assemblage would, however, benefit from a more considered comparison of the similarities and differences between the samples at Over and those from Haddenham, Wardy Hill and other nearby Iron Age settlements – this is not feasible within the remit of an assessment report, but could be expected to take 1-2 days. Finally, the insect remains (largely of beetle exoskeleton) that were recovered from [1024] F. 214 could be worthy of basic taxanomic identification to clarify the ecology of this possible midden; however the numbers of individuals in that sample would be too low to justify analysis further than presence/absence. It is anticipated that any entomological work on that one sample could be expected to take 1–2 days.

Sample number		<100>	<101>	<102>	<103>	<104>	<105>	<107>
Context number		**[505]**	**[505]**	**[505]**	**[505]**	**[503]**	**[503]**	**[503]**
Feature number / Test Pit grid square		1G	1G	1G	1G	8G	8G	8G
Period		prehistoric	prehistoric	prehistoric	prehistoric	prehistoric	prehistoric	prehistoric
Feature type		0-10cm buried soil	10-20cm buried soil	20-30cm buried soil	30-40cm buried soil	0-10cm buried soil	10-20 cm buried soil	30-40cm buried soil
Sample volume/ litres		15 L.	15 L.	15 L.	15 L.	15 L.	15 L.	15 L.
Fraction of flot sorted		1	1	1	1	1	1	1
Fraction of heavy residue sorted		1	1	1	1	1	1	1
Latin Name	**English Name**							
CHARRED CEREAL GRAINS								
Hordeum vulgare ***sensu lato*** grain	domesticated barley grain	1		1				
Triticum sp. grain	wheat grain	1						
cereal indet. grain					1			
CHARRED NON-CEREALS								
Chenopodium album L.	fat-hen	1		1	1			
Brassica nigra type [coarse textured form]	black mustard					1 *cf.*		
Eleocharis cf. *palustris* (L.) Roem. & Schult.	common spike-rush					2	1	
WATERLOGGED NON-CEREALS								
Urtica dioica L.	stinging nettle						- u/w	
Montia fontana ssp. *chondrospermum*	blinks						+ u/w	
Hyoscyamus niger L.	henbane					+ u/w	++ u/w	
Mentha spp.	mints						- u/w	
Alisma plantago-aquatica L.	water-plantain						- u/w	
Charophyte oogonium	algae 'seeds'		-			-		
CHARCOAL								
charcoal volume/ ml.		2 ml.	1 ml.	1 ml.	< 1 ml.	1 ml.	< 1ml.	< 1ml.
large charcoal (>4mm)		+	-	-	-	+	-	
med. charcoal (2-4mm)		++	++	++	+	++	-	
small charcoal (<2mm)		+++	+++	+++	++	+++	++	+
- twiggy charcoal								
OTHER BIOLOGICAL ITEMS, EXCLUDING MOLLUSCS								
burnt bone fragments		-		-		++		
bone fragments		+	+	+	+	++	+	+
small vertebrate bone		+		-				
ostrocod			-			+	-	
UNTRANSFORMED BIOLOGICAL ITEMS								
Chenopodium album L.	fat-hen		-	-	+		+	
Atriplex patula L. */prostrata*	common/spear-leaved orache	-		-				
Solanum nigrum L.	black nightshade	-						
intrusive roots		+++	++	++	++	++	++	-
ARTEFACTS								
pottery		+	+	+	+			
burnt clay						-		-
burnt flint		++	++	++	++	++	++	++
worked flint		+		-		+	+	++

Table 32: Results of the environmental bulk samples from the buried soil

Key: - 1 or 2 items; + less than 10 items; ++ 10 to 50 items; +++ more than 50 items;
u untransformed, probably modern; w waterlogged

Feature number		F.214	F.214	F.215	F.218	F.224	F.224	F.224	F.227
Context number		[1024]	[1080]	[659]	[1103]	[1123]	[1124]	[1124]	[1130]
Sample number		<116>	<128>	<134>	<129>	<131>	<130>	<133>	<132>
Period		late IA/ RB	late IA/ RB	later IA	later IA	later IA	later IA	later IA	later IA
Feature type		'midden'	'midden'	posthole	burnt pit layer	posthole	posthole base	posthole	posthole
Sample volume/ litres		16 L.	28 L.	25 L.	17 L.	20 L.	0.5 L.	0.25 L.	0.5 L.
Fraction of flot sorted		1	1	1	1	1	1	1	1
Fraction of heavy residue sorted		1	1	1	1	1	1	1	1
Latin Name	**English Name**								
CHARRED CEREAL GRAINS									
straight, hulled *Hordeum vulgare* subsp. *vulgare* grain	hulled domesticated barley grain					1			
twisted, hulled *Hordeum vulgare* subsp. *vulgare* grain	6-rowed hulled domesticated barley grain		1			2			
hulled *Hordeum vulgare* ***sensu lato*** grain	hulled domesticated barley grain				5	2		1	
Hordeum vulgare ***sensu lato*** grain	domesticated barley grain		1	1	14	4			1
Triticum cf. *dicoccum* Schübl. grain	emmer wheat grain				2				
Triticum cf. *spelta* L. grain	spelt wheat grain	1	2				1		
Triticum dicoccum/ spelta grain	spelt/emmer wheat grain					2			
Triticum sp. grain	wheat grain			1		2			1
Hordeum/ Triticum sp. grain	barley or wheat grain		1		5	1			
cereal indet. grain		1	2		7	7	1		1
CHARRED CEREAL CHAFF									
Hordeum vulgare subsp. *vulgare* rachis internode	6-rowed barley chaff					1			
Triticum dicoccum Schübl. glume base	emmer wheat chaff				4				
Triticum spelta L. spikelet fork	spelt wheat chaff					3	1		1
Trititcum spelta L. glume base	spelt wheat chaff	2				15	7		
Triticum dicoccum/ spelta spikelet fork	emmer or spelt wheat chaff					4			
Triticum dicoccum/ spelta glume base	spelt/emmer chaff		1		2	17			
Triticum sp. glume base	hulled wheat chaff						1		
cereal indet. culm node	straw joint		1			2			1
cereal indet. culm fragments	straw					+			
CHARRED NON-CEREALS									
Ranunculus cf. *bulbosus* L./*acris* L./*repens* L.	cf. bulbous/meadow/creeping buttercup	1							
Ranunuculus sardous Crantz.	hairy buttercup					1			
Thalictrum flavum L.	common meadow-rue				2				
Papaver somniferum L.	opium poppy					1			
Papaver rhoeas L.	common poppy					1			
Fumaria officianalis L.	common fumitory				1				
Urtica urens L.	small nettle					1			
Chenopodium album L.	fat-hen				7	3			
Chenopodium sp	goosefoot			1					
Atriplex patula L. /*prostrata*	common/spear-leaved orache					1			
Chenopodiaceae indet. kernel	Goosefoot Family					1			
Stellaria media (L.) Vill.	chickweed					1			2
Stellaria pallida (Dumort.) Crép	lesser stitchwort					1			
Silene latifolia Poir.	white campion					2			
large Caryophyllaceae indet. (>3mm)	large Pink Family seed					1			
small Caryophyllaceae indet. (<1mm)	small Pink Family seed				1				
Fallopia convolvulus (L.) Á. Löve	black-bindweed				4	6			
Rumex acetosella L.	sheep's sorrel					1			
Rumex hydropathalum Huds.	water dock					2			
Rumex sanguineus/ conglomeratus/ obstutifolius	small-seeded dock	1			1				
Rumex sp. kernel	dock kernel			2					
small *Rumex* sp.	small-seeded dock type					6			
Malva sylvestris L.	common mallow					1 (with testa)			
Malva sp.	mallows	1			1	3			
Brassica nigra type [coarse textured form]	black mustard				1				
small *Vicia/Lathyrus* sp. (<3mm)	vetch/wild pea				1	10			
Medicago cf. *lupulina* L. fruit	black medick					3			
Medicago sp.	medicks					6			
large*Trifolium/Medicago* spp. (2-3mm)	medium-seeded clover/medick						1		
cf. *Pastinaca sativa* L.	wild parsnip								1
large flat Apiaceae indet. kernel	Carrot Family seed					2			
Hyoscyamus niger L.	henbane								1
Mentha spp.	mints				1	1			
Plantago cf. *lanceolata* L.	ribwort plantain					1			1
Veronica sp.	speedwell					1			
Arctium sp.	burdocks		1			7			
Tripleurospermum inodorum (L.) Sch. Bip.	scentless mayweed					25			3
Eleocharis cf. *palustris* (L.) Roem. & Schult.	common spike-rush	1				2			
Eleocharis sp.	spike-rush					1 kernel			
Schoenoplectus lacrustis (L.) Palla / *tabernaemontani*	common club-rush	1		4					
trigonous-seeded *Carex* spp.	true sedges					4			
lenticular-seeded *Carex* spp.	true sedges				1	4			
Festuca/ Lolium sp.	fescue/rye-grass	1			1				
Poa spp.	meadow-grass					9			2
Avena sp.	wild/cultivated oat					2			
Phleum sp.	cat's-tails	2							
Bromus cf. *secalineus* L.	rye brome	1	1			62	3	2	2
Bromus/Avena sp.	brome/ wild or cultivated oat					41		1	
large Poaceae indet. (>4mm)	large Grass Family seed					7			
large Poaceae indet. culm node	Grass Family stem joint	1	1			1			
Poaceae culm fragments	Grass Family stem fragments	+	-						
small seed indet. (<3mm)					2	2			
large seed indet. (>3mm)						2	1		
small pod indet.						1			
WATERLOGGED NON-CEREALS									
large *Ranunculus* cf. *bulbosus* L./*acris* L./*repens* L.	c.f. bulbous/meadow/creeping buttercup		+						
Ranunculus subgen. *BATRACHIUM* (DC.) A. Gray	crowfoots		+						
Thalictrum flavum L.	common meadow-rue	-	-						
Papaver somniferum L.	opium poppy	-							
Papaver rhoeas L.	common poppy		-						
Papaver dubium L.	long-headed poppy	-							
Papaver argemone L.	prickly poppy	-	-						
Urtica dioica L.	stinging nettle		+++		+				
Chenopodium album L.	fat-hen	+++	+++		+				
Atriplex prostrata Boucher ex DC./ *patula* L.	spear-leaved/common orache	-							
Montia fontana ssp. *chondrosperma* (Fenzl) Walters	blinks	+	-						
Stellaria neglecta Weihe	greater chickweed	-	-						
Lychnis flos-cuculi L.	ragged robin				-				
Silene latifolia Poir.	white campion	-	-						

Feature number		**F.214**	**F.214**	**F.215**	**F.218**	**F.224**	**F.224**	**F.224**	**F.227**
Context number		[1024]	[1080]	[659]	[1103]	[1123]	[1124]	[1124]	[1130]
Sample number		<116>	<128>	<134>	<129>	<131>	<130>	<133>	<132>
Period		late IA/ RB	late IA/ RB	later IA	later IA	later IA	later IA	later IA	later IA
Feature type		'midden'	'midden'	posthole	burnt pit layer	posthole	posthole base	posthole	posthole
Sample volume/ litres		16 L.	28 L.	25 L.	17 L.	20 L.	0.5 L.	0.25 L.	0.5 L.
WATERLOGGED NON-CEREALS									
Persicaria maculosa Gray/ *lapathifolia* (L.) Gray	redshank/ pale persicaria			- u/w					
Rumex sanguineus/ conglomeratus/ obstutifolius	small-seeded dock	-	+						
Malva sp.	mallows		-						
Viola sp.	violets		-						
Rorippa nasturtium-aquaticum (L.) Hayek	water-cress		-						
Brassica nigra type [coarse textured form]	black mustard		+						
Anagallis arvensis L.	scarlet pimpernel		-						
Cornus sanguinea	dogwood		-						
Berula erecta (Huds.) Colville	lesser water-parsnip		-						
Oenanthe aquatica (L.) Poir.	fine-leaved water-dropwort		-						
Aethusa cynapium L.	fool's parsley		-						
Apium nodiflorum (L.) Lag.	fool's-water-cress					-			
Conium maculatum L.	hemlock		-						
Hyoscyamus niger L.	henbane		++		-				
Menyanthes trifoliata L.	bog bean		-						
Ballota nigra L.	black horehound				-				
Mentha spp.	mints		+						
Pinguicula vulgaris L.	common butterwort	+	++		-				
Sambucus nigra L.	elder	++	+						
Sambucus ebulus L.	dwarf elder	+	++		-				
Sagittaria sagittifolia L.	arrowhead	-	+						
Alisma plantago-aquatica L.	water-plantain	+++	+++	- u/w	++	+			
Potamogeton spp.	pondweeds	-	++						
Zannichellia palustris L.	horned pondweed		-						
Lemna sp. seed	duckweed	++							
Juncus sp.	rushes	+							
Eleocharis cf. *palustris* (L.) Roem. & Schult.	common spike-rush		+						
Schoenoplectus cf. *lacrustis* (L.) Palla	common club-rush	-	+++						
Cladium mariscus (L.) Pohl	great fen sedge	-							
trigonous-seeded *Carex* spp.	true sedges	-	+						
Charophyte oogonium	algae 'seeds'	-	++						
wood fragments		+	+++						
CHARCOAL									
charcoal volume/ ml.		2 ml.	2 ml.	5 ml.	2 ml.	4 ml.	4 ml.	2 ml.	3 ml.
large charcoal (>4mm)		+	+	+	+	++	+	+	+
med. charcoal (2-4mm)		++	+	++	+	++	++	++	++
small charcoal (<2mm)		+++	++	+++	++	+++	+++	+++	+++
- twiggy charcoal					-				
OTHER BIOLOGICAL ITEMS, EXCLUDING MOLLUSCS									
bone fragments		+	-			-			
small bone				+		+	+		-
rodent bone		+							
amphibian bone		+				+			
eel bone		+							
fish scale		++	+						
insect fragments		++							
Daphnia sp. winter eggs			++						
Cristatella sp. statoblast	freshwater bryozoan	+++	+++		-				
UNTRANSFORMED BIOLOGICAL ITEMS									
Betula pendula Roth	silver birch		++ u/w	+ u	+ u	+ u			
Acer sp.	sycamore/maple			- u					
Chenopodium album L.	fat-hen			+ u					
Atriplex patula L. /*prostrata*	common/spear-leaved orache			- u					+ u
Stellaria sp.	small-seeded chickweed					+ u			
Viola sp.	violets					+ u			
Lapsana communis L.	nipplewort				- u				
Sonchus oleracea	X sow-thistle					- u			- u
Taraxacum spp.	dandelions			- u					
Couch grass rhizomes							+ u/w		
intrusive roots						+ u			- u
fly puparium						1			
MOLLUSCS									
Bithynia tentaculata (L.) operculum	quiet rivers & still but large waters	++	+		-				
Trichia hispida (L.) TYPE	catholic				-				
ARTEFACTS									
pottery			+	++	+	+			++
burnt clay				+++	+++	+++		+	+
burnt flint				++	+	++	+		+
worked flint				+		+	-	-	+

Table 33: Results of the environmental bulk samples from settlement features

Key: - 1 or 2 items; + less than 10 items; ++ 10 to 50 items; +++ more than 50 items

u untransformed, probably modern; w waterlogged

DISCUSSION

Perched relatively high at 3.00m OD on the end of a marked sand ridge (of 'motorway-like' proportions), since the discovery of occupation traces at this point during the Fenland Survey, it has been recognised as a distinct locale in the lowland context of its immediate landscape. This sense of the ridge - and particularly its western terminus - as *an extraordinary place* has only been furthered by Boreham's recent palaeoenvironmental researches, as it is now known to have been ringed by rivers on all of is sides (though the degree to which, over its western length, the southern, Channel VII should be counted as a full 'channel' as opposed to a 'submerged terrace' probably warrants further consideration).

This picture will only become more nuanced as further radiocarbon dates are achieved for its landscape sequence. However, establishing that the main palaeochannel (I) would have been intertidal during, at least, the earlier Bronze Age, and probably also the later Neolithic is clearly a finding of major significance. While, based on the environmental analyses, this would seem to have only been a 'deep channel event' and had limited impact on the immediate environment as such (i.e. not a saltmarsh), the influence of the marine incursions into the Fenland basin on the local landscape cannot be over-estimated. The resultant backing-up of the river systems (and accompanying tidal surges) would have been directly responsible for the 'races-like' network of river channels that are now known to define the unique palaeo-topography of the *Over Narrows*. Moreover, its impact on, and probable displacement of lowlying communities to the northeast could well have resulted in the 'bunching-up' of people at this locale. Indeed, its effect on animal/fish populations should equally be acknowledged as this probably also resulted in their displacement and concentration in the Fenland's intertidal fringes. There has been far too little consideration paid to the impact of the Fenland's marine incursions on the region's populations (and their 'behaviours'); as a place where peoples and wild life may, as a result, have come into close contact, this clearly warrants emphasis as a major research theme of the '*Narrows*' archaeology.

The character of the two phases of the site's sequence that are exclusive to the current ridge-end site-area alone (and did not extend any distance east along its length) - its Mesolithic and Iron Age usage - attest to a remarkable reappraisal of it as a locale; both, nevertheless, appear to directly relate to the fact that it was the highest point within the immediate landscape. During the Mesolithic, it would have been *the* place to overview the lowlands of the river's floodplain and clearly would have been an optimum position for a hunting/foraging camp. Whereas, by the Iron Age, the ridge would have been reduced to a small island, ringed by river channels and marshes, and have been quite inaccessible except by boat, it was clearly held an appropriate place to conduct 'watery' ritual ceremonies. One can only think that, so different as they were, in their respective times these two extraordinary site-phases were equally suitable to this extraordinary locale.

'Open-Site' Usage

Extending over more than 1,000sqm and having sieved 'core-zone' values in excess of 150 flints per metre (234 max.; non-sieved ave. of 18 pieces), the Mesolithic site excavated across the ridge's southern flank can only be counted as a very dense scatter and, locally, would only compare to that at Foulmire Fen, Haddenham (Evans & Hodder 2006a). Unfortunately, no features as such occurred in association with the flintwork, nor did any surfaces survive. Effectively 'locked into' the buried soil - a multiple-period horizon - no bone or plant remains can be assigned to it with any confidence. It must, therefore, remain a 'flint-only' event/site and without any economic data to detail the nature of the ridge's utilisation at that time.

Given the incredible quantities of material locked within the site's buried soils horizon - and the long-sequence of activity they attest to - it does seem remarkable that a greater number of features were not evinced. Certainly, there is no escaping the possibility that some may have existed solely within the deep profile of the palaeosol along the southern side of the ridge, and did not penetrate down into the ridge's sands. Yet, during the course of excavations we were fully aware of the potential for this and, accordingly, kept close watch of the test pits' sections to this end (and also for any buried surface layers); aside from the few 'feature-fragments' that were distinguished therein, this obviously was to negative avail. In this regard, we were also fortunate at having had the magnetic susceptibility survey conducted across this horizon, in which no features were readily apparent.

While still admitting the possibility of unrecognised, or at least 'lost', features (perhaps through soil leeching and/or earthworm-/root-action), how do we account for the site's incredible buried soil/'surface' finds numbers? Especially in the light of the long-sequence of activity-phases they register. Surprisingly enough, this is not as difficult as it might first appear. On the one hand, the vast majority of its flintwork is obviously of Mesolithic date and, typical of the period, must clearly relate to some manner of 'open' (i.e. non-feature-based) camp site and, as argued above, its lithics were clearly augmented by other subsequent 'visitations'/episodic usage (e.g. Neolithic and Beaker). On the other hand, the bulk of its pottery appears to be of Late Bronze Age attribution. While such 'open-type' modes of site usage would be uncharacteristic of that time - and could even be broadly comparable to the 'great' midden sites of the period (e.g. Potterne and Runnymede; e.g. Needham & Spence 1997) - that is exactly what appears to be occurring in the main area of Middle/Late Bronze Age 'occupation' within the central swathe of the Godwin Ridge, to the east of the current site. This will only be dealt with in detail in the next of the *Over Narrows* reports (Evans & Vander Linden forthcoming), but suffice it say that the vast majority of the settlement features there would seem to be of Middle Bronze attribution, whereas it is overlain by dense, midden-like Late Bronze Age surface deposits; indeed, the buried soil densities indicate that the latter extends westwards and well beyond the limits of the earlier, Middle Bronze Age settlement features and their accompanying enclosure system. Therefore, given this, the densities of this material found at the end of the ridge would similarly attest to 'open-type' midden-related activity, and whose full dynamics will only be fully appreciated when all of the ridge's data is incorporated and overviewed.

Iron Age - Watery Ritual and Settlement

A major issue arising concerns the degree to which the unambiguous Iron Age ritual activity that occurred along the northern flank of the ridge (F. 214, *etc*.) related to the enclosure and roundhouse located upon its crown. In other words, was the latter actually a shrine and/or perhaps the house of a resident 'hermit priest'? If taking the western Godwin Ridge 'island' as a whole, only a narrow spine (*c*. 1ha in area) would then, in total, have lain above 2.00m OD - the recognised dry-/wetland datum-divide of that time - and by this measure, at least theoretically, the settlement could not have fulfilled any kind of normative farmstead role as there simply wouldn't have been enough dry land-mass to successfully farm (see though below). Yet, of course, this does not preclude a specialist function; perhaps the abode of a fisherman and his family, who may have also practiced a degree of animal husbandry (and have even served as a ferrymen to bring 'participants' out to the ridge during religious ceremonies).

Given that the vast majority of the site's animal bone seems attributable to the later/Late Iron Age (with only one auroch bone probably relating to its Mesolithic usage) and by that period's obvious ritual component on the site, the question then becomes to what degree its faunal assemblage reflects a strictly 'ritual economy'. If we ignore the horse bone as here being entirely sacrificial (their remains being restricted to the F. 214 'midden'), then the site clearly had a sheep-based economy with ovicaprids constituting 58% of its main domesticates (MNI). This would be well in keeping with what is known of the local Iron Age economy (see Evans & Hodder 2006b for overview) and the assemblage as a whole could be considered typically 'domestic' (though at *c*. 21% of the main domesticates [MNI], pigs are rather high; see Davis in Evans 2003).

Yet, two other factors could argue otherwise. First, is the rather high numbers of water birds. While they might only attest to domestic fowling activities, it is worth remembering the degree to which birds featured in the Snow's Farm Romano-Celtic shrine, Haddenham (*ibid*), where they were clearly 'sacrificed' in the presumption that their entrails were read for augury (see below). As stressed by Seetah above, the second factor is the frequency of juvenile animals among the site's main domesticates (apart from horse), as this could further suggest sacrificial practice. This being said, this certainly was not an 'either/or' instance of ritual *vs*. domestic, as the evidence of on-site textile production - spindlewhorls, loomweights and even the 'ritual-set' bundle of weaving combs - indicates the immediate (and 'real') economic role of sheep.

Also noteworthy in this regard is the frequency of fish bone, all of which that was identified being pike. Interestingly, aside from occurring within the F. 214 'midden' and their occasional presence in test pit contexts, they exclusively occurred within the Iron Age pitting cluster features and not the enclosure ditch and its associated house (Structure 1). The evidence could, therefore, suggest that the fishing largely occurred - perhaps as a seasonal activity - prior to establishment of its permanent Iron Age settlement and related to its 'pitting-phase' usage.

While termed a 'midden' during fieldwork, as highlighted by Ballantyne above, this may be inappropriate due to the paucity of plant food remains within F. 214's deposits. Equally, the appellation suggests that it almost developed organically and without intention at the riverside, which belays the horse remains associated with it (and its equally 'placed' clutch of brooches); 'platform', therefore, seems a much more apt entitlement. The question

remains whether it was built/laid solely for ritual purposes or if it first served another function, and in this regard the quantity of fish bone within the flot residues of the samples taken from it maybe informative. Given the oft-cited 'watery' character of Iron Age ritual practice, a riverside 'ritual platform' would certainly not be a far-fetched notion; however, from the scale of the site's fishing activities, it may well be more appropriate to see this as a fishing platform located in an area that subsequently (but perhaps concurrently) saw significant ritual activity/deposition.

Aside from attesting to the site's wetland context, the degree to which cereals feature in its charred plant assemblage came as quite a surprise. Even though the available dry land-mass of the island was then arguably too small to support a 'full farmstead', the presence of cereal chaff would certainly indicate 'on-site'/'island' cultivation and crop processing; a point which is only further emphasised by the settlement's six-poster granary (Structure 2).

Returning to our main theme, it would indeed be a compelling interpretative proposition to see the enclosure's roundhouse as some manner of shrine. Potentially resonating with those Iron Age round structures occasionally found beneath formal Romano-Celtic temples/shrines (see Evans & Hodder 2006b for overview), it would thereby raise the question to what degree there was a distinct ritual architecture of the period (aside from Late Iron Age square/rectangular settings; see e.g. Downes 1997). Yet, after long review of the evidence, this does not seem to be the case and there is no particular reason to envisage the roundhouse as a shrine *per se*; rather, it seems just that - *the house* of a domestic unit. The question then becomes what was the interrelationship between the ritual activities occurring at the riverside and this abode, and whether they were completely separate 'spheres' (with the layout of its 'L'-shaped enclosure bounding-off the 'ritual zone' behind it).

Of the ritual activities/'packages' occurring down by the water's edge, it is really only the clutch of weaving combs that could have had any obvious resonance with the house's inhabitants (who clearly practised textile manufacture). Unlike, for example, on many other settlements of the period (e.g. Hurst Lane or Wardy Hill, Ely; Evans 2003 and Evans *et al*. 2007), no human bone was directly associated with it. Equally, nor did any horse remains occur within its enclosure - just with the F. 214 'platform' - and, given the seemingly unassuming qualities of the ridge's household, it is difficult to accredit them as being the source of the fine brooches deposited at the river's edge. If we add to this that the quantity of pottery of the period found on the ridge seems far too great for its immediate domestic community, then, weighed as a whole, the evidence suggests that the ritual activity largely occurred independent of its resident household and perhaps involved larger community-group gatherings, with participants coming to the locale from further afield.

Finally, with its ritual activities seeming to continue until the decades of the second half of the 1st century AD, the site offers an intriguing parallel with the Snow's Farm shrine complex located nearby on the Upper Delphs Terrace (Evans & Hodder 2006b). Established in the mid 2nd century and, thereby, reflecting much more fully Romanised ritual behaviour, what would be common to them are sacrificial water birds. While sheep also featured at both, in the case of the Godwin Ridge-end site none seem to have been 'formally' deposited and their remains might, after all, still just reflect domestic consumption; whereas in the Snow's Farm shrine complete sheep carcasses and head-and-hooves deposits were ritually placed. In contrast, at the Godwin's platform it was dismembered horses that seem to have been the prime ritual animal. If we add to this the

evidence of the Godwin's human remains - especially its four-hole-bored skull - this riverside complex uniquely details later Iron Age ritual activity, and provides a significant 'closing chapter' in the history/sequence of this extraordinary ridge-end locale.

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APPENDIX

Feature Descriptions

F. 200 ***Drip-gully*** - Eight slots were dug, anti-clockwise:

The first slot corresponds to the eastern terminus. It was 55cm wide and 9cm deep. Its cut ([537]) consisted of moderately sloping sides leading to an irregular base. Its fill ([536]) was a firmly compacted friable greyish brown sandy silty clay, with occasional gravel and charcoal inclusions. It contained 11 potsherds, eight bones, a piece of burnt clay, two struck flints, six burnt flints and a burnt stone.

The second slot was 36cm wide and 7cm deep. Its cut ([533]) consisted of shallow curvilinear sides leading to a concave base. Its fill ([532]) was a compacted friable dark greyish brown silty sandy clay, with gravel and charcoal inclusions; no finds were recovered.

The third slot was 37cm wide and 3cm deep. Its cut ([535]) consisted of gently sloping sides leading to a flat base. Its fill ([534]) was a compacted friable dark greyish brown silty sandy clay, with rare gravel and occasional charcoal inclusions. It contained a potsherd, eight bones, a struck flint and three burnt flints.

The fourth slot was 42cm wide and 7cm deep. Its cut ([540]) consisted of shallow sides leading to a flat base. Its fill ([539]) was a firmly compacted friable greyish brown sandy silty clay with occasional gravel and charcoal inclusions. It contained a potsherd.

The fifth slot was 45cm wide and 10cm deep. Its cut ([558]) consisted of gradually sloping concave sides leading to an irregular base. Its fill ([557]) was a loose greyish brown silty sandy clay, with rare gravel and occasional charcoal inclusions. It contained ten bones and nine burnt flints.

The sixth slot was 23cm wide and 12cm deep. Its cut ([562]) consisted of concave sides leading to a concave base. Its fill ([561]) was a compacted friable dark greyish brown silty sandy clay with occasional gravel and charcoal inclusions; no finds were recovered.

The seventh slot was 43cm wide and 9cm deep. Its cut ([556]) consisted of moderately sloping sides leading to an irregular base. Its fill ([555]) was a firmly compacted greyish brown sandy silty clay with occasional charcoal flecks. It contained a potsherd, three bones, a struck flint and a burnt flint.

The eight slot corresponds to the western terminus. It was 41cm wide and 3cm deep. Its cut ([567]) consisted of shallow sides leading to a rounded base. Its fill ([566]) was a friable greyish black sandy silty clay with occasional charcoal flecks. It contained a bone, two burnt flints and a burnt stone.

F. 201 ***Boundary Ditch*** - Ten slots were dug, some of them as part of the test-pit sampling:

The first slot corresponds to the eastern terminus. It was 75cm wide and 8cm deep. Its cut ([545]) consisted of gently sloping sides with a gradual break of slope leading to a flat base. The basal fill ([544]) was a firmly compacted grey mottled with orange silt, with iron pan inclusions. The top fill ([543]) was a firmly compacted grey silty sand with rare gravel inclusions. These two fills contained a potsherd, a struck flint and six burnt flints.

The second slot was 54cm wide and 10cm deep. Its cut ([577]) was asymmetrical, with a steep side to the north, and a gently sloping side to the south, leading to a slightly concave base. Its fill ([576]) was a firmly compacted grey sandy silt, with rare gravel inclusions; no finds were recovered.

The third slot was 1.94m wide and 21cm deep. Its cut ([580]) was asymmetrical, with a stepped gently sloping side to the north, and a stepped moderately sloping side to the south, leading to a slightly concave base. The basal fill ([579]) was loose brownish grey sandy silt with some gravel inclusions. The upper fill ([578]) was a firmly compacted grey slightly sandy silt with gravel inclusions and sandy patches. Three potsherds, a struck flint and two burnt flints were recovered.

The fourth slot was 1.3m wide and 16cm deep, and done when digging TP21R. Its cut ([626]) consisted of irregular concave sides gradually leading to an uneven flat base. Its fill ([625]) was a firmly compacted friable greyish brown sandy silt with rare gravel inclusions. It contained 22 potsherds, 18 bones, 3 pieces of burnt clay, 11 struck flints, seven burnt flints and a burnt stone.

The fifth slot was done when digging TP99C. It was 16cm deep. Its cut ([779]) consisted of concave sides leading to a flat base. Its fill ([778]) was a sticky mid to dark brown clayish sand. It contained a bone, a struck flint, four burnt flints and a burnt stone.

The sixth slot was when digging TP21X. Its cut ([790]) consisted of concave sides leading to a flat base. It contained two potsherds, a bone, a burnt flint and a burnt stone. Its fill ([789]) was a firmly compacted dark brown nearly black silty clay.

The seventh slot was done when digging TP22K. Its cut ([773]) consisted of concave sides leading to a flat base. Its fill ([772]) was a moderately compacted sticky mid to dark brown clayish sand, with, towards the base, some mottling of orange sand; no finds were recovered.

The eight slot was 70cm wide and 5cm deep. Its cut ([622]) consisted of rounded irregular sides leading to a flat base. Its fill ([621]) was a firmly compacted friable dark brown sandy silt. 38 potsherds, 56 bones, 17 struck flints, 20 burnt flints and two burnt stones.

The ninth slot was done when digging TP22Q. Its cut ([771]) consisted of moderately steep sides leading to a flattish base. Its fill ([770]) was a friable greyish brown silt with occasional charcoal flecks; no finds were recovered.

The tenth slot corresponds to the southern terminus. It was 50cm wide and 3cm deep. Its cut ([629]) consisted of shallow concave sides leading to a flattish base. Its fill ([628]) was a firmly compacted friable dark brown sandy silt. It contained some pottery, bone, struck flint and shell.

F. 202 ***Rectangular Pit*** - 2.22cm long, 90cm wide and 8cm deep. Its cut ([547]) consisted of near vertical sides gradually leading to a flattish base. Its fill ([546]) was a firmly compacted mottled orange brown slightly sandy silt with occasional gravel and iron pan inclusions; no finds were recovered. This (modern?) pit cuts both features F. 203 and F. 205.

F. 203 ***Re-cut of ditch F. 201*** (curvilinear ditch) - This was excavavted in four segments:

The first slot was 92cm wide and 12cm deep. Its cut ([583]) consisted of gently sloping sides leading to a concave base. The basal fill ([582]) was a silt mixed with orange sand. The upper fill ([581]) was a firmly compacted grey sandy silt with occasional gravel inclusions. Finds comprised pottery, bone, struck and burnt flint. These fills contained 11 potsherds, 11 bones, four struck and four burnt flints.

The second slot was 1.75m wide and 30cm deep. Its cut ([605]) consisted of moderately sloping sides leading to a flattish base. The basal fill ([604]) was a firmly compacted greyish mottled with brown silty sand, with iron pan inclusions. Fill ([603]) was a firmly compacted greyish brown sandy silt with very occasional gravel inclusions.

The third was 76cm wide and 32cm deep Its cut ([550]) consisted of steeply sloping sides with a moderate break of slope leading to a rounded base. The basal fill ([549]) is a firmly compacted light brownish orange slightly silty sand. It corresponds to the natural silting of the ditch. It contained four potsherds, seven bones, a struck flint and a burnt stone. The top fill ([548]) was a firmly compacted greyish brown mottled with slight orange sandy silt, with rare gravel and iron pan inclusions. Finds comprised 59 bones (including fish), 15 struck flints, 22 burnt flints, four burnt stones and 35 potsherds. Moreover, three potsherds, four bones, a struck flint, a burnt flint and two burnt stones were found in both fills [548-9].

The fourth slot was 60cm wide and 20cm deep. Its cut ([635]) consisted of steep concave sides, with a break of slope leading to a flattish base. Its fill ([634]) was a firmly compacted friable dark grey brown sandy silt

with rare charcoal inclusions. It contained two potsherds. This ditch was truncated by pit F. 202 and re-cut ditch F. 204.

F. 204 ***Re-cut of ditches F. 201/ F. 203*** - This was observed in four slots:

The first slot was 84cm wide and 22cm deep. Its cut ([585]) consisted of moderately sloping sides, stepped to the south, gradually leading to a concave base. Its fill ([584]) was a firmly compacted grey sandy silt with gravel inclusions. It contained pottery, bone, struck and burnt flint.

The second slot was 30cm wide and 25cm deep. Its cut ([607]) consisted of moderately sloping sides gradually leading to a flat base. Its fill ([606]) was a firmly compacted greyish brown silty sand, mottled, towards the base, with orange yellow sand, and with very occasional gravel inclusions.

The third slot was 50cm wide and 19cm deep. Its cut ([552]) was asymmetrical, with a gently sloping side to the west, and a slightly stepped sloping side to the east, leading to a rounded base. The basal fill ([551]) was a firmly compacted greyish brown sandy silt, with patches of orange sand and rare gravel inclusions. It contained 68 potsherds and 51 bones. The upper fill ([563]) was a firmly compacted light grey silt with occasional gravel inclusions. It contained two potsherds and a struck flint.

The fourth slot was 82cm wide and 24cm deep. Its cut ([662]) consisted of shallow concave sides leading to a shallow base. Its fill ([654]) was a friable mid brown silt. Its re-cut ([656]) consisted of rounded sides leading to a rounded base. Its fill ([655]) was a sticky grey silty clay mottled with red sand, and with occasional gravel inclusions. It contained ten potsherds, five bones, a burnt flint and a piece of burnt clay. This ditch truncates feature F. 205 and is cut by ditch F. 203.

F. 205 ***Pit*** - 2.24m long. Two slots were dug:

The first slot was 1.3m wide and 15cm deep. Its cut ([554]) was asymmetrical, with a shallow moderately sloping side to the west, and a steep side to the west, leading to a flat base. Its fill ([553]) was a compacted grey mottled with orange sandy silty, with rare gravel and charcoal, and occasional iron pan inclusions. It contained some burnt stone.

The second slot is set where the pit has been truncated by ditches F. 203-4. Its Fill ([608]) was a firmly compacted greyish brown sandy silt, with occasional charcoal flecks; no finds were recovered.

F. 206 ***Pit*** - 56cm wide and 10cm deep. Its cut ([565]) consisted of moderately sloping concave sides, with a gentle break of slope leading to a flat base. Its fill ([564]) was a firmly compacted mottled light grey and orange silty sand; no finds were recovered. This pit is truncated by ditches F. 203-4.

F. 207 ***Posthole*** - 23cm in diameter and 16cm deep. Its cut ([560]) consisted of vertical sides leading to a flat base. Its fill ([559]) was a loose light yellowish brown clayey sand. It contained a piece of burnt clay and two struck flints. This posthole is truncated by drip-gully F. 200.

F. 208 ***Posthole*** - 20cm in diameter and 22cm deep. Its cut ([569]) consisted of vertical sides leading to a flat base. Its fill ([568]) was a loose yellowish brown clayey sand, with rare gravel inclusions. It contained a potsherd, a bone and five burnt flints.

F. 209 ***Pit*** - 1.6m long, 1.22m wide and 20cm deep. Its cut ([624]) consisted of near vertical sides with a marked break of slope leading to an uneven flat base. Its fill ([623]) was a firmly compacted medium grey sandy silt, with orangey yellow patches, as well as rare gravel and moderate charcoal inclusions. It contained 49 potsherds, 65 bones, 73 pieces of burnt clay, ten struck flints, 16 burnt flints, and six burnt stones.

F. 210 ***Sub-circular Pit*** - 91cm long, 83cm wide and 14cm deep. Its cut ([638]) consisted of steep sides with a marked break of slope leading to a flat base. Its fill ([636]) was a friable dark brownish grey silty sand, with occasional gravel and charcoal inclusions. It contained ten potsherds, a bone and a burnt flint. Fill ([637]) contained eight potsherds, a bone, a struck flint and a burnt stone.

F. 211 ***Posthole*** - 30cm in diameter and 15cm deep, found when digging TP54A. Its cut ([642]) consisted of concave sides gradually leading to a concave base. Its fill ([641]) was a very soft grey sand.. It contained two potsherds, two struck flints and two burnt flints.

F. 212 ***Posthole*** - 50cm long, 27cm wide and 9cm deep, found when digging TP76A. Its cut ([648]) consisted of moderately sloping concave sides with a clear break of slope leading to a concave base. Its fill ([647]) was a moderately compacted sticky mid to dark grey clayey sand with rare gravel and charcoal, and common iron pan inclusions. It contained two struck flints, a burnt flint and a burnt stone.

F. 213 ***Pit*** - 1.9m long, 1.4m wide and 31cm deep. Its cut ([661]) consisted of steep sides with a sharp break of slope leading to a flat base. The basal fill ([660]) was a pale yellowish brown silty sand heavily mottled with yellow sand. The top fill ([659]) was a mottled pale yellow brown and mid grey black silty sand with occasional gravel and moderate charcoal inclusions. Finds comprised 69 potsherds, 59 bones, two struck flints, five pieces of burnt clay, four burnt flints and three copper beads. This pit is truncated by ditch F. 203.

F. 214 ***'Midden'*** - Roughly circular in shape. Its deposits ([940], [957], [1024], [1089]) consisted a homogenous soft light mid greyish brown silty sand with common root and moderate gravel inclusions. It contained quantities of Iron Age pottery, bone, struck flint. This deposit was about 15cm thick. This 'midden' lies to the north of the site and has been laid on top of silt and washed sand deposits related to the activity of a palaeochannel. It contained c. 2,240 potsherds, 3,960 bones, 454 struck flints, 490 burnt flints, 43 pieces of burnt clay and two loomweight fragments. This feature was bisected by the Transect 13 (and its cross-axis) and, therefore, was also excavated under the following Test Pit numbers: TPs 44U-Y; TPs 45K, P, U-X; TPs 48A, F, K, P & U; TP 89 and TP 105.

F. 215 ***Posthole*** - 30cm in diameter and 30cm deep. It was cutting ([714]) the surface of TP96. Its fill ([713]) was a mid brown grey sand with moderate gravel and frequent iron pan inclusions, similar to the surrounding buried soil. It contained a potsherd.

F. 216 ***Pit*** - 67cm long, 52cm wide and 24cm deep, found when digging TP17K. Its cut ([751]) was asymmetrical, with a steep side to the west, and a near vertical side to the west, with a sharp break of slope leading to an uneven flat base. Its fill ([750]) was a moderately well compacted mid grey silty sand with occasional gravel, charcoal and iron pan inclusions. It contained a struck flint, 29 burnt flints and five burnt stones.

F. 217 ***Pit*** - Found when digging TP50C. Its cut ([988]) consisted of concave sides gradually leading to a rounded base. Its fill ([987]) was a firmly compacted dark greyish brown silty sand, with frequent iron pan lumps and moderate charcoal flecks; no finds were recovered.

F. 218 ***Pit*** - 1.38m long, 1.09m wide and 25cm deep. Its cut ([1105]) consisted of near vertical straight sides with a sharp break of slope leading to a flat base. The basal fill ([1104]) was lining against the slope and consisted of a soft firm reddish brown and pale grey clay, with very rare gravel inclusions. The upper fill ([1103]) was a firmly compacted friable dark grey slightly silty sand, with frequent patches of mid orangey brown and pale grey fired clay, as well as with rare gravel and frequent charcoal inclusions. Finds comprised 44 potsherds, 16 bones, four burnt flints and two burnt stones. This pit is likely to have been an oven. This pit truncates pit F. 231.

F. 219 ***Rectangular Pit*** - 2m long, 95cm wide and 13cm deep. Its cut ([1092]) consisted of gradually sloping sides leading to a concave base. Its fill ([1093]) was a soft peat with occasional charcoal inclusions. Finds comprised eight potsherds, six bones, three struck and two burnt flints.

F. 220 ***Tree-throw*** - Its fill ([1099]) contained four potsherds, two bones and two burnt flints.

F. 221 ***Pit*** - 1.28m long, 1.13m wide and 9cm deep. Its cut ([1101]) consisted of shallow sides leading to an irregular base. Its fill ([1100]) was a moderate dark grey sandy silt, with some orangey sand patches and gravel inclusions. It contained five potsherds, eight bones, three struck flints and three burnt flints.

F. 223 ***Animal Burrow*** - The fill of this disturbance ([1107]) contained six potsherds, six bones and a burnt flint.

F. 224 ***Large Posthole*** - 90cm long, 85cm wide and 32cm deep. Its cut ([1125]) consisted of steep concave sides with a marked break of slope leading to a rounded base. The basal fill ([1124]) is a moderately compacted sticky mid to dark reddish brown silty sand, with frequent wood inclusions. The upper fill ([1123]) was a moderately compacted mid brownish grey silty sand, with moderate gravel and charcoal inclusions. It contained three potsherds, three bones, 101 pieces of burnt clay, five struck flints, eight burnt flints and three burnt stones. This posthole forms a quadrangular structure with postholes F. 225-9.

F. 225 ***Large Posthole*** - 60cm long, 45cm wide and 30cm deep. Its cut ([1127]) consisted of near vertical sides, with a gradual break of slope leading to a rounded base. Its fill ([1126]) was a moderately compacted mid greyish brown silty sand with occasional gravel, charcoal and iron pan inclusions. It contained four potsherds, two bones, 105 pieces of burnt clay, a struck flint, three burnt flints and two burnt stones. This posthole forms a quadrangular structure with postholes F. 224 and F. 226-9.

F. 226 ***Large Posthole*** - 60cm long, 55cm wide and 37cm deep. Its cut ([1129]) consisted of near vertical concave sides with a sharp break of slope leading to a rounded base. It seems that at least three different settings ([1173]) has been tried for this posthole, corresponding either to various building stages, or to tightly set postholes. Fill ([1128]) was a moderately compacted mid to dark greyish brown silty sand, with rare gravel and occasional charcoal inclusions. There was also a thick layer of iron pan. It contained two potsherds, four bones, 215 pieces of burnt clay, three struck flints, two burnt flints and four burnt stones. This posthole forms a quadrangular structure with postholes F. 224-5 and F. 227-9.

F. 227 ***Large Posthole*** - 85cm long, 70cm wide and 20cm deep. Its cut ([1131]) consisted of gradually sloping concave sides leading to an uneven flat base. Its fill ([1130]) was a soft light greyish and orangey brown silty sand, with rare gravel and frequent iron pan inclusions. There was frequent orangey mottling towards the base. It contained a potsherd, a struck flint, a burnt flint and a burnt stone. This posthole forms a quadrangular structure with postholes F. 224-6 and F. 228-9.

F. 228 ***Posthole*** - 40cm long, 35cm wide and 10cm deep. Its cut ([1133]) consisted of gradually sloping concave sides leading to an uneven flat base. Its fill ([1132]) was a soft light greyish and orangey brown silty sand, with rare gravel and charcoal inclusions. There were interstratified lenses of windblown sand. It contained a potsherd, three pieces of burnt clay and two burnt flints. This posthole forms a quadrangular structure with postholes F. 224-7 and F. 229.

F. 229 ***Posthole*** - 40cm long, 35cm wide and 15cm deep. Its cut ([1135]) consisted of near vertical concave sides, slightly undercut in the northeastern corner, with a sharp break of slope leading to an uneven flat base. Its fill ([1134]) was a soft light greyish and orangey brown silty sand, with rare charcoal and two large iron pan inclusions; no finds were recovered. This posthole forms a quadrangular structure with postholes F. 224-8.

F. 230 ***Posthole*** - 54cm long, 48cm wide and 10cm deep. Its cut ([1231]) consisted of steep slightly concave sides gradually leading to a concave base. Its fill ([1115]) is a light medium grey silty sand with charcoal flecks. It contained a struck flint.

F. 231 ***Pit*** - 1.6m long, 1.1m wide and 9cm deep, which is truncated by pit F. 218. Its cut ([1146]) consisted of steep concave sides gradually leading to a flat base. The basal fill ([1145]) was a friable mid grey slightly silty sand with rare gravel and very frequent iron pan inclusions. It contained seven potsherds and a burnt flint. The upper fill ([1144]) was a friable mid grey slightly silty sand with frequent greenish brown mottling and patches of pale orange sand and of pale grey silt. There were some gravel inclusions. It contained 11 potsherds, 12 bones, a struck flint, two burnt flints and a burnt stone.

F. 232 ***Tree-throw***.

F. 233 ***Pit*** - 2.15m long, 1.56m wide and 35cm deep. Its cut ([1157]) consisted of near vertical sides with a break of slope leading to a flat base. The basal fill ([1153]) was a firmly compacted mid brownish grey sandy clay with rare gravel inclusions. Fill [1152] was a firmly compacted mid to dark brownish grey silty sand with rare gravel inclusions. It corresponds to an animal den. Fill [1151] was similar to fill [1153]; fill ([1148] was comparable fill [1152] and also corresponds to some animal activity; fill [1150] was similar to fill [1152] and also reflects some animal activity. Finds comprised 16 potsherds, 18 bones, a struck flint and a burnt stone.

F. 234 ***Oval Pit*** - 80cm long, 63cm wide and 13cm deep. Its cut ([1176]) consisted of near vertical straight sides leading to a slightly concave base. The basal fill ([1175]) was a friable mid reddish sand with patches of mid grey slightly silty sand, and rare gravel inclusions. It contained a potsherd a burnt flint. The upper fill ([1174]) was a friable mid grey slightly silty sand with moderate greyish brown mottling and occasional patches of pale yellow orangey sand. There were rare gravel inclusions. It contained two struck flints, two burnt flints and two some burnt stones.

F. 235 ***Tree-throw***.

F. 236 ***Tree-throw***.

F. 237 ***Pit*** - Truncated by pit F. 231, its cut ([1202]) consisted of near vertical sides with a sharp break of slope leading to a concave base. Its fill ([1106]) is a mixture of dark grey brown sand with mid reddish sand and pale yellow sand. There were occasional rare gravel and occasional charcoal and iron pan inclusions. It contained 81 potsherds, 39 bones, a piece of burnt clay, nine struck flints, 45 burnt flints, and five burnt stones.

F. 238 ***Small Pit/Posthole*** - 42cm long, 38cm wide and 27cm deep, found when digging TP 16Q. Its cut ([982]) consisted of moderately steep sides with a gradual break of slope leading to a concave base. Its fill ([981]) was a moderately compacted mid grey sandy silt with occasional iron pan inclusions; no finds were recovered.