

YARNTON CASSINGTON EVALUATION 1993



OXFORD ARCHAEOLOGICAL UNIT

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Plate 1: The Beaker grave under excavation



Plate 2: The Beaker grave group

Roman and Saxon periods, shifting eastward across the terrace through time. The eastern part of this site was excavated in 1990-91 (YWRF). Features on the western limit of this village were examined during the evaluation. In Cassington settlement may have followed a slightly different pattern, as a small late Bronze and Iron Age settlement site was situated on the floodplain in the southwest of the study area, defined by a long boundary ditch to the east. South of this site, on islands between palaeochannels, two middle Iron Age farmsteads have been found which appear to be of a similar type to pastoral settlements investigated at Farmoor and Port Meadow in the Upper Thames Valley. However, records and finds made during gravel extraction at Tuckwell's Pit demonstrate the presence of Iron Age occupation on the adjacent second gravel terrace and indicate variability in the settlement record for this period.

The nature of Roman occupation at Worton was elucidated by evaluation and the plotting of cropmark features. The presence of structures and a small quantity of tile in the trenches may indicate that the site was of higher status than its neighbour at Yarnton. The fields within the study area were farmed from the Roman villages of Worton and Yarnton and a considerable body of data is accumulating on the farming practices and the environment of these communities. Some explanations for changes in the composition of carbonized plant remains on second gravel terrace sites in the Roman period are emerging.

The early and middle Saxon settlement at Yarnton, which was excavated in 1990/91, is of national significance because of its exceptional structural, spatial and environmental evidence. Evaluation suggests that the Saxon settlement at Worton may be equally interesting. The extent of settlement, attested by sunken-featured buildings, appears to be greater than at Yarnton and there are indications from the cropmark survey that timber halls may survive here also. The rectilinear field layout visible from the air and plotted by RCHME resembles that at Yarnton. Experience suggests that evidence of the wider environment will be forthcoming from investigations of waterlogged remains from the channels and channel-related activity on the floodplain.

The extent of medieval settlement has been clarified by the evaluation of the study area. The complex nature of changing field boundaries, especially around Yarnton, suggests that light may be shed on the development of this village and its fields from the mid Saxon into the medieval period. Evidence of land use on the floodplain survives in the waterlogged palaeochannels which cross the area. The antiquity of the hay meadows, for which Yarnton is famed, should be established by the investigation of pollen remains in these features.

Of greatest importance, however, is the framework of continuous occupation within which this body of data is set and the associated environmental and landscape information which is emerging. The area has exceptional

1. SUMMARY

In autumn 1993 the Oxford Archaeological Unit undertook evaluation in the parishes of Yarnton and Cassington, Oxfordshire with English Heritage funding and the kind permission of the landowner, Mr Guy Pharoan. The aim of the work was to assess the archaeological resource surviving in the study area which is defined below (Section 2) and illustrated on Figure 1. Part of this area had already been investigated by fieldwalking, excavation and evaluation; the current work concentrated on those elements not previously examined.

The impetus for the work arose from the threat of gravel extraction and focused on the ARC Cassington gravel pit. This area encompasses a diverse landscape, continuously occupied from the Neolithic to the later Saxon period. The scope of the project has been expanded to include sites around the edge of the gravel pit enabling the investigation of adjacent contemporary settlements and cemeteries at Worton and Yarnton into the medieval period.

The settlement record which the evaluation has demonstrated is remarkable. A wide range of activities have been attested on gravel terraces, the floodplain and within and on the edges of palaeochannels of the Neolithic, Bronze Age, Iron Age, Roman, Saxon and medieval periods.

A rectangular Neolithic enclosure, the ditch of which contained Peterborough Ware, lay adjacent to the Yarnton Floodplain Excavation area (YFP). Pits containing Peterborough Ware (in Ebbsfleet, Mortlake and Fengate substyles) and Grooved Ware (Durrington Walls and Clacton substyles) were also located, one lying to the north of the enclosure and the others concentrated in an area further west. Other Neolithic features were encountered in the southwest of the evaluated area. A Beaker flat grave was found to the north of the Neolithic enclosure with an exceptionally fine Beaker containing a smaller Beaker and an end scraper. Six barbed and tanged arrowheads lay in a cluster beneath the pelvis of the body. Another, less well-preserved burial to the west contained a possible Beaker sherd. Many other prehistoric features were located on the floodplain, sealed beneath Roman ploughsoil. These appeared to be concentrated around the palaeochannels which crossed the site, and formed discrete groups indicating the existence of defined activity or settlement areas. On the second gravel terrace prehistoric features appeared to be more dispersed. However, cropmark evidence and geophysical survey demonstrated the presence of at least four ring ditches on this terrace, lying beyond the threatened area.

Evaluation added weight to the hypothesis that settlement on the floodplain ceased in the late Bronze Age and that occupation moved onto the second gravel terrace. At Yarnton this focused on the site already evaluated on Cresswell Field, which continued to be occupied through the Iron Age,

potential for the study of the development of rural society throughout the prehistoric and historic periods.

2. INTRODUCTION

2.1 Area Examined

2.1.1 The area evaluated in 1993 lies in the Upper Thames Valley north of Oxford. It is situated north of the river Thames on an area of second gravel terrace and floodplain between the villages of Yarnton to the east and Cassington to the west (SP 4711). It is two kilometres east of the Thames/Evenlode confluence.

The study area comprises:

1. The ARC Cassington gravel extraction pit
2. Worton Rectory Farm cropmark site
3. Worton Rectory Farm deserted medieval village
4. Worton Saxon cemetery
5. Cassington floodplain sites
6. Yarnton early medieval settlement
7. Yarnton Saxon cemetery
8. Yarnton Mead (the area which has been ploughed)

2.1.2 The study area is illustrated in Figure 1.

2.1.3 **The Cassington gravel extraction pit** (Figure 1, element 1) covers an area of some 140 hectares on second gravel terrace (at c 65 m OD) and Thames floodplain (at c 59 m OD) with some Oxford clay in the parishes of Yarnton and Cassington. Seventy hectares were evaluated in the current exercise. The pit lies to the north of the A40 Oxford to Cheltenham road and is bounded on the east and northeast by the Oxford to Worcester railway line. Its western boundary is formed by a 350 m exclusion zone around Cassington village. Land use in areas not extracted is exclusively arable.

Evidence from fieldwalking, previous evaluation and some excavation suggested that rural settlement sites and buried landscapes from the Neolithic to the early medieval period survive. Excavation and evaluation on the Yarnton Gravel Terrace site (YWRP) examined a settlement occupied from the late Bronze Age to the mid to late Saxon period. Recent work on the floodplain has investigated occupation from the Neolithic to the late Bronze Age (Yarnton Floodplain excavations, YFP). Both domestic and ceremonial activity are evidenced, predominantly the former. Some sites in

the pit area are sealed and protected by alluvial cover and are well preserved. Palaeochannels running through the area provide enormous potential for the retrieval of environmental data, evidence of channel use, including timber structures, and the elucidation of the alluvial history of the area.

2.1.4 The Worton Rectory Farm cropmark site (Figure 1, element 2) lies on the second gravel terrace west of the modern hamlet of Worton. Evidence from air photographs and fieldwalking had suggested Bronze Age to Saxon occupation of the site. A Bronze Age ring ditch was visible; subsequent use of the site was probably domestic. Superficially this site appeared to have had a similar pattern of continuous settlement to the Yarnton Gravel Terrace site.

The southern part of the site lies within the gravel extraction pit and is suffering plough damage; the western edge lies beneath the line of the future Cassington spur road. Otherwise the fields are under pasture and not threatened.

2.1.5 The Worton Rectory Farm deserted medieval village (Figure 1, element 3) lies south of the modern hamlet of Worton. Slight house platforms and hollow ways have been noted in this area which probably indicate the full extent of Worton in the medieval period. Today land is used is either as gardens or paddocks.

2.1.6 The Saxon cemetery at Worton (Figure 1, element 4) was largely destroyed by Tuckwell's gravel extraction pit in the 1930s and 1940s. This was the cemetery belonging to the Worton Saxon settlement. Land use is currently pasture.

2.1.7 The Cassington floodplain sites (Figure 1, element 5) are situated on the west and southwest edges of the gravel extraction pit on the adjacent area of floodplain to the Worton gravel terrace site. They are a small group of prehistoric sites whose relationship to the Worton site is of direct relevance to the research aims of the project. They lie on the line of the proposed A40 Cassington spur road and in the southwest corner of the gravel pit. Evaluation on the road line suggested the presence of several small settlements/farmsteads of late Bronze Age and Iron Age date with some late Neolithic activity in the area. These sites appear to be well preserved. Land use is pasture.

2.1.8 The early medieval Yarnton settlement (Figure 1, element 6) may lie between the excavated Yarnton Gravel Terrace Saxon settlement and the

medieval centre around the church. This was first suggested by evidence from the excavations, which indicated that settlement continued to shift progressively east and north-eastward, and was supported by the recovery of medieval finds during fieldwalking in this area. Its existence would provide the physical link in the record of continuity of the Yarnton settlement from the late Bronze Age to the present day. These fields are under arable cultivation.

- 2.1.9 **The Saxon cemetery at Yarnton** (Figure 1, element 7) lies north of the Yarnton Gravel Terrace excavation site (YWRF) and the Oxford to Worcester railway line. It was probably the cemetery of the Yarnton Saxon settlement. 19th century records describe the partial destruction of this site by both railway construction and contemporary gravel extraction north of the line. Recent evaluation demonstrated that the gravel workings were extensive. This fields is arable.
- 2.1.10 A small part of **Yarnton Mead** (Figure 1, element 8) has been ploughed south of the A40 road. Before the construction of the road it was part of the fields to the north, the date of enclosure of which is uncertain. The site overlies both gravel island and alluvial soils. Some evaluation on the line of the A40 road widening scheme on this part of the Mead uncovered early prehistoric features. These are probably part of the site located by flint scatters and in excavations north of the road in the gravel extraction pit.
- 2.1.11 Of the elements in the study area the ARC Cassington gravel extraction pit (Area 1), the Cassington floodplain sites (Area 5) and part of Yarnton Mead (Area 8) are threatened; Worton Rectory Farm cropmark site (Area 2), deserted medieval village (Area 3) and Saxon cemetery (Area 4) and Yarnton early medieval settlement (Area 6) and Saxon cemetery (Area 7) are under no current threat.
- 2.1.12 Together the sites within the study area form a small, cohesive group of settlements within their landscape, on two different topographies with an apparently contemporary, parallel development from the early prehistoric period to the present day.

This area has the potential to address research issues of national academic importance and contribute substantially to the understanding of early activity in the region, which despite extensive work in recent years is not comprehensively understood.

2.2 Reasons for the Project

2.2.1 Gravel extraction

ARC have planning permission to extract gravel from 140 hectares of second gravel terrace and floodplain between Yarnton and Cassington. Their planned staging of extraction is known but it should be stressed that to date

there have been and continue to be substantial modifications to the programme which have significantly altered the imminence of the threat. 'As dug' areas could be extracted at any time.

2.2.2 Dewatering and desiccation of deposits.

In many ways this is potentially the most pressing threat to the archaeology as a whole and one with long-term implications, at least as far as the floodplain is concerned. Although clay bunds are being constructed to protect the SSSIs to the south of the A40 they do not protect fields within the pit area. It is known from experience at the Drayton Cursus that total loss of organic preservation can occur over considerable distances in five years (Mark Robinson pers. comm.).

2.2.3 Road construction

The construction of the Cassington spur road and roundabout junction as part of the A40 widening scheme will affect a swathe of land on the west edge of the pit and an adjacent area to the southwest of it. The main widening of the A40 (Witney to Cassington Dualling and North Oxford Bypass) will cut through the southern edge of the study area.

2.2.4 Plough damage

The presence of large numbers of sherds of friable prehistoric and Saxon pottery on the field southwest of Worton Rectory Farm indicates that ploughing is eroding this site. This may also apply to other parts of the pit where prehistoric finds are coming to the surface.

3. ARCHAEOLOGICAL BACKGROUND

3.1 Summary of Previous Work

3.1.1 Introduction.

The archaeology of the Thames/Evenlode confluence area is particularly rich. Important sites from the Neolithic to the Saxon period have been found within a small area, including the large late Iron Age enclosure at Cassington Mill (Benson & Miles 1974, 84-7, Harding 1972). However, over the last century many of these sites have been destroyed by gravel extraction, road and railway construction and house building with, at best, only limited and piecemeal recording having taken place. (See *Archaeological Investigation in the Upper Thames Valley: A Proposal for Research in the Cassington/Eynsham/Yarnton Area (Evenlode Confluence)* submitted to English Heritage December 1989). For this reason the nature of the archaeology is still unclear.

3.1.2 Nineteenth Century Destruction

(Figure 1)

In the last century the construction of the Oxford to Worcester railway and its branch line to Witney and Fairford cut through the pit area. The present haul road utilizes the old branch line. Bronze Age Beakers and part of the Yarnton Iron Age settlement were observed during railway construction. Associated gravel extraction north of the railway line destroyed a large part of a Saxon cemetery.

Gravel extraction in Tuckwell's pit in the 1930s and 1940s damaged at least some of the Saxon cemetery which lies southwest of Worton.

3.1.3 Field Investigation

Oxford University Archaeological Society undertook some fieldwalking over the cropmark site west of Worton Rectory Farm in 1970 and found Romano-British pottery on the gravel terrace (SMR 3746).

M. Aston, then of Woodstock Museum, observed house platforms and a hollow way of the medieval village of Worton in the area south of the farm during field investigations (SMR 5539).

3.1.4 Air Photographs

Aerial photography indicated the presence of archaeological sites in the pit area. The recently excavated Yarnton Gravel Terrace site (YWRF) was discovered from the air by St Joseph in 1962 (University of Cambridge Committee for Aerial Photography, AFU 65, 66 and 67). An earlier flight by St Joseph led him to believe there was a villa south of Yarnton (Journal of Roman Studies, 1961 vol. 51: 134), though the precise location is not clear.

Flights by Allen in the 1930s (Allen Collection, Ashmolean Museum) and more recently by the RCHME (eg NMR SP4611/2) revealed cropmarks of a ring ditch, rectangular enclosures, pits and possible sunken-featured buildings west and southwest of Worton Rectory Farm (Fig. 26).

A small rectangular enclosure with an entrance to the north (SMR 1382) just north of the A40, in the south of the pit area, was also photographed by Allen. Faint traces of possible features are visible to the north in other photographs (eg NMR SP4610/1 and SP4610/2).

In the summer of 1990 cropmarks were clearly visible in the field north-west of the Yarnton Gravel Terrace excavation area (Cresswell Field) and photographs taken by R.A. Chambers of the Oxford Archaeological Unit indicated the presence of a small rectangular enclosure as well as pits and larger enclosures.

3.1.5 Field Names and Land Boundaries

The field names of 'Black Patch' and 'Chissels Ground' have been recorded for Cresswell Field, suggesting that occupation material and small stone had been found on the ground surface. It was suspected that this could have been the site of the elusive Roman villa.

Botanical study of some of the hedgerows in the area and the examination of documentary sources by Alison McDonald has led to the formulation of various interesting theories about the medieval land boundaries which have not been tested on the ground. The Yarnton/Cassington and Yarnton/Begbroke parish boundaries could fossilize early medieval hay meadow strips.

3.1.6 The recent *Victoria County History Oxon* xii covers this area and details the manorial and economic history of the parishes of Yarnton and Cassington.

3.2 Results of Current Fieldwork

The Oxford Archaeological Unit has undertaken fieldwork in the ARC gravel extraction pit, largely with English Heritage funding, since 1989. Of the 140 hectares under threat, approximately 35 hectares had been evaluated and 8 hectares excavated before the 1993 evaluations (35 hectares had already been extracted without any archaeological investigation). A fieldwalking project was carried out over the pit area and limited palaeochannel trenching took place in 1990/1 (*Yarnton & Cassington Worton Rectory Farm; 1990/91 Assessments*). Some evaluation was also occasioned by the proposed widening of the A40 road in the south, the associated construction of a spur road on the western edge of the gravel pit and tree planting north of the railway line in Yarnton Mead Farm.

3.2.1 Yarnton Gravel Terrace Excavations (YWRF)

In 1990-1991 English Heritage funded excavation of a settlement site on the second gravel terrace at Yarnton (YWRF) (Hey 1991). The western part of the site was evaluated in autumn 1991 in Cresswell Field (see *Yarnton & Cassington Worton Rectory Farm; 1990/91 Assessments*). The site was a rural settlement dating from the late Bronze Age to the Saxon period (though a Neolithic flint scatter over the site and occasional late Neolithic and Bronze Age pits demonstrated that the site was used at an earlier date). Part of the Roman (and possibly Saxon) cemetery was excavated. Evidence suggests that the occupation was continuous, though not always of the same intensity, and that it shifted progressively eastward.

This site is unique in the Upper Thames Valley for its longevity of occupation, despite nearly 20 years' extensive study by OAU and 30 years of earlier research. Its value is enhanced by the occupation of the site

through periods of ill-understood transition (late Bronze Age to early Iron Age, middle Iron Age to late Iron Age, late Iron Age to early Roman, late Roman to Saxon, and possibly mid to late Saxon periods for which land use issues are particularly relevant). Changes in the nature of settlement type, often manifested in the Upper Thames Valley by dislocation, can be studied on the Yarnton site within a framework of continuity.

The landscape and land use of the settlement were recognized as important issues from the start of the project, and strategies to recover relevant information during excavation, for example sampling for environmental data, were employed. The good preservation of finds, especially the faunal remains, enhances the value of the site in this respect. Post-excavation analysis of this site has recently commenced.

The earliest element of the site, in Cresswell Field to the west, remains to be excavated, however. Preliminary results indicate a chronological overlap with activity on the floodplain (see below). The evidence suggests that the late Saxon/early medieval settlement (Figure 1, element 6) lies between the excavation area and the medieval centre around the church and manor. The Saxon cemetery lay north of the excavation site (Figure 1, element 7).

3.2.2 Stage 4 Floodplain Excavations (YFP)

In November 1991 English Heritage funded evaluation of part of the Yarnton floodplain which was imminently to be extracted for gravel (*Yarnton Floodplain; 1991 Field Evaluation*). Neolithic and Bronze Age activity was located on both banks of a channel which bisected this area; sited on a gravel island to the north and on earlier channel sediments to the south. These sites were sealed by alluvium. Part of a flint scatter lay over the site to the north but, although the southern area had not been fieldwalked, it certainly would not have been located by this method because of the depth of alluvial cover here.

As a result of the evaluation English Heritage funded excavation of 3.5 hectares of the site (YFP) (Hey 1993b, *Yarnton Floodplain Post-Excavation Assessment, November 1993*) which is unique in the region, both because of the presence and quality of earlier prehistoric domestic activity and the unusual nature of its ceremonial component.

Evidence of activity from the Mesolithic period and settlement from the early/mid Neolithic to the late Bronze Age was found, with all major pottery styles represented. Continuity and change from the earliest occupation of the area can thus be examined here. House plans were recovered and a range of shallow domestic contexts such as cooking areas were excavated as well as some deeper features, including wells. Carbonized plant remains from these features were well preserved as were contemporary waterlogged material from deeper pits and the adjacent channel. Some features

contained deliberately placed deposits.

Deposits of burnt stones and charcoal on the channel bank were associated with trampled areas of burnt stone which ran down into the channel and collected in its bed. Waterlogged silts formed in the channel through the Bronze Age and preserved wood debris, including worked wood, wood chips and bark chips, which indicate wood processing nearby. The uprights of a small bridge were driven through these deposits in the late Bronze Age. Well-preserved waterlogged macrobotanical remains, insects, pollen and snails were retrieved from the channel. Our understanding of alluvial processes in the area was advanced as a result of this work and the sediments are being dated by a range of experimental techniques, including optical and magnetic dating.

On a lower-lying, preserved ground surface on the south bank of the channel activity appears to have been largely ceremonial in character. Two parallel Neolithic ditches ran down to the channel, associated with a flint scatter. Waterlogged environmental remains were recovered from the bottoms of these ditches. Adjacent, and mostly parallel, to the ditches were rows of postholes with groups of slots at right angles. The main posthole rows were aligned upon a penannular ditch on the channel edge and a ring ditch on the opposite bank. Many of the features were very shallow and only cut into the old topsoil without penetrating the underlying layers. They survived because they had been sealed and protected by alluvium.

A rising water table in the Bronze Age led to the abandonment of the area for occupation, although evidence of its use in later periods has been recovered, for example sand and gravel causeways were constructed over the channel in the Iron Age and/or Roman period, and Roman field boundaries and even *in situ* ploughsoils survive. In the Saxon period the channel appears to have been reduced to a series of ponds and evidence of animal trampling and flax retting has been found associated with these.

3.2.3 Survey and Field Evaluation in the Pit Area

In the early stages of the Yarnton Gravel Terrace excavation project a mat of wood was found preserved in a palaeochannel during ARC gravel extraction in the east of the pit. It was at this stage that the presence of palaeochannels in the pit area and their potential began to be appreciated.

In autumn 1990 English Heritage funded a preliminary assessment of the archaeological potential of the pit area. A fieldwalking project was undertaken on all the arable fields within the pit area, and some beyond its boundaries, in order to locate other sites within the pit, to assess the extent of the site catchment area and to examine manuring patterns and establish land use. Trenches through a palaeochannel on Oxey Mead, a hay

meadow which had formed part of a study by early ecologists in the 1930s and which was about to be extracted by ARC, and a channel immediately south of the settlement site were excavated to assess their environmental potential.

The assessment demonstrated the considerable potential of the study area for the investigation of early settlement, landscape, land use and the relationship between second gravel terrace and floodplain (*Yarnton & Cassington Worton Rectory Farm; 1990/91 Assessments*).

Four prehistoric sites were identified by fieldwalking on gravel islands within the floodplain, in Yarnton and in Cassington. One of these, represented by a dense flint scatter and burnt flint, had principally Mesolithic and late Bronze Age elements. A single late Bronze Age sherd was also recovered from this area. A late Bronze Age site in the southwest of the pit area was identified by a light pottery scatter. The potential for the survival of earlier prehistoric settlement began to be realized as did the possibility that contemporary adjacent settlements of earlier prehistoric date might exist.

Fieldwalking confirmed the presence of the earliest phase of the Yarnton Gravel Terrace settlement site in Cresswell Field to the northwest of the excavated area.

A pottery and flint scatter around Worton Rectory Farm indicated activity from the early Bronze Age to the Saxon period. This reinforced the evidence of the air photographs. Superficially it appeared that there might be a similar pattern of continuous settlement and land use, culminating in the two surviving Domesday settlements, either side of the Cassington/Yarnton parish boundary.

It was established that there is an extensive floodplain with channels, gravel islands and buried ground surfaces adjacent to a substantial area of higher second gravel terrace within the same pit area. The possibility of examining this relationship directly has not previously existed in the Upper Thames Valley.

Well-preserved organic remains were found in all the palaeochannels excavated on the floodplain and possibilities for the use of these channels, for example for flax retting, were suggested. Although only a small proportion of the full length of the channels which cut through this area have been investigated, the quantity of evidence produced is dramatic, illustrating the considerable potential of these features.

Fields which were manured from the settlement in the Roman period were identified from thin but extensive pottery scatters. Light scatters of early Iron Age pottery were more difficult to interpret. Subsequent evaluation and excavation has demonstrated that buried ploughsoils survive.

The potential for studying the alluvial history of the floodplain in this area became clear and it was possible to propose a limited sequence of channel use. The possibility of examining the relationships between channels and settlements and of retrieving environmental information from all major periods began to be realized.

In autumn 1991 and early 1992 evaluation was undertaken on the proposed line of the A40 Cassington spur road and in 1993 the OAU evaluated the archaeological potential of the North Oxford Bypass Scheme. These evaluations located prehistoric settlement between palaeochannels which crossed the floodplain gravel in the southwest of the area (Figure 1, element 5). The evidence suggests these sites were small farmsteads of late Bronze and middle Iron Age date. (Hints were present that there could be differences in the settlement pattern between Yarnton and Cassington in this period). Some late Neolithic material was also present.

Further north, on the line of the Cassington spur road, the western edge of the Roman and Iron Age site on the second gravel terrace at Worton was located.

On the eastern end of the A40 Witney to Cassington Dualling Scheme, south of the A40 in Yarnton Mead, shallow features which appeared to be late Neolithic/early Bronze Age in date were located on the same gravel island as the dense flint scatter located during fieldwalking to the north. A little to the east work on the line of the North Oxford Bypass demonstrated the continuation south of the A40 of the buried ground surface exposed in the Yarnton Floodplain excavation area (YFP). A deep ditch running at right angles to the linear Neolithic ditches on the Floodplain site bore a striking resemblance to them and also contained a little Peterborough Ware pottery.

3.3 Current Research

It is unusual to find an area in which so much other research is under way. Work, for example that being undertaken by the Institute of Hydrology and Dr Alison McDonald and Julie Reese Jones at the Oxford University Research Laboratory, will greatly enhance the research potential of the study area. It will also significantly contribute to ongoing archaeological research in the Upper Thames Valley.

- 3.3.1 Botanical research on the flora of hay meadows and the effects of water levels and grazing upon it is in progress by Dr Alison McDonald. She is concentrating on the Sites of Special Scientific Interest (SSSIs) which lie immediately south of the study area and north of the Thames.
- 3.3.2 The Institute of Hydrology are monitoring water levels both within the ARC pit and the SSSIs to the south to assess the effects of dewatering by

ARC with particular reference to effects on the flora. They hold a series of multi-spectral air photographs of the area taken by NERC airborne remote sensing unit.

- 3.3.3 Southampton University is conducting research on the Pleistocene deposits within the gravel pit and is monitoring the extraction process. Layers with well-preserved faunal and botanical remains have been located beneath the gravel and Palaeolithic finds have been recovered.
- 3.3.4 Innovative research on optical dating techniques is being undertaken at Yarnton by Julie Reese Jones of the Oxford University Research Laboratory. Preliminary results are very promising with dates from a sequence of palaeochannel deposits adjacent to the Bronze Age wooden bridge which accord with the supposed stratigraphic sequence and C14 dates from the structure. Further research on this technique is of international significance.

4. AIMS AND OBJECTIVES

- 4.1 The aim of the Yarnton Cassington Project is a multi-period, landscape-wide, interdisciplinary study of an area in the Upper Thames Valley.

The aim of the evaluation project was to assess the archaeological resource of the study area and gain a clearer understanding of the potential of the site and its academic value. Detailed evaluation was undertaken on the threatened parts of the study area to assess the nature, location, extent, date, condition and significance of surviving archaeological remains. Non-threatened areas were surveyed in order to evaluate their extent and general character and assess their possible contribution to the understanding of the settlement pattern.

A model was proposed for the archaeology on the floodplain and second gravel terrace in this area which could be tested against the results of the evaluation and future investigation. The extent to which this model has been confirmed or modified is discussed below (Section 14.6 & 16.1).

4.2 The Academic Issues of the Project

The academic issues of the project and their national context are described in detail in the research design (*Yarnton Cassington Project, Project Design Specification: Evaluation of the Study Area*, May 1993) and will not be reiterated here. They focus on the wide variety and longevity of the archaeological evidence both for settlements and landscape within a single

block of land, much of which appears to be well-preserved. The potential for the investigation of ill-understood periods of transition from the Mesolithic to the medieval period has particular significance.

Settlement

The potential for the examination of settlement patterns on both gravel terrace and floodplain is high on this site and can be investigated in terms of location, economic strategy, cultural identity, and land use. Continuity and discontinuity in these aspects of the archaeological record can be studied, contemporary settlements can be compared and the inter-action between adjacent sites can be examined. The investigation, dating, characterization and effect of boundaries is integral to this research.

Environment

The national importance of the project is enhanced by its potential for reconstructing the landscape and land use of each of these settlements and for studying changing relations between populations and their environments and the exploitation of natural resources up to the present day. This is possible through the examination of topographical information, well preserved environmental data, including pollen, from the settlement sites, environmental data from the palaeochannels, buried ploughsoils, land boundaries and the botanical investigation of modern hay meadow flora and hedgerows. Understanding the hydrology and the processes of alluviation and floodplain land use have also great importance within this project.

4.3 The National Context

The Yarnton Cassington study is set in the context of landscape projects which are underway in Britain or have recently been completed, and the value of this kind of investigation is becoming increasingly apparent. Yarnton Cassington differs from other national landscape projects in several important ways, the most fundamental difference being one of scale as it is at an intermediate stage between large-scale field survey and site-specific investigation. The advantage of this scale of work is the ability to examine landscapes in greater depth whilst still achieving the perspective which landscape studies allow.

This pocket-sized landscape approach can be proposed because the site is already known to encapsulate several topographies and at least two adjacent contemporary settlements. Thus the dynamics of inter-site relationships and developments and the use of the topography can be investigated in greater detail than the more general settlement patterns revealed by the coarser and more limited data of fieldwalking.

Regional and national variation

A major objective of the project will be the comparison of the settlement and landscape patterns with:

- a) other sites and historical evidence in the Eynsham, Cassington and Yarnton area
- b) other well-studied areas in the Thames Valley (the Lechlade, Stanton Harcourt, Abingdon, Dorchester and Reading areas) and the new South West Oxfordshire Reservoir Project (SWORDS) which is on very different topography
- c) other lowland catchments, notably the Nene
- d) other areas of Britain where large-scale landscape studies have been carried out such as the Wash Fenland and the Wessex chalk uplands

4.4 Strategic planning and conservation issues

Other issues of national importance which will be addressed by the Yarnton Cassington Project are those related to planning. The extent to which alluvial cover prevents the identification of archaeological sites is increasingly an issue as the focus of mineral extraction has moved from higher gravel terrace areas. The ability to model and hence predict the archaeological resource of floodplain and gravel terrace areas would contribute substantially to the planning process.

- 4.5 The effects of dewatering on well-preserved organic remains in these low-lying areas is ill understood and the means of mitigating their destruction is in need of research. This is an issue of great importance relevant to all areas with preservation of waterlogged remains.
- 4.6 The development of methods for discovering and evaluating archaeological sites on alluvial floodplains has considerable potential in the Yarnton Cassington study area.

4.7 The Specific Objectives of the Evaluation Project

The objectives of the evaluation project were:

- 4.7.1 To define the archaeological potential of the study area and identify issues, areas and methods for further study by examining the following elements (the areas referred to are shown on Figure 1):
 - A. Settlement on second gravel terrace at Yarnton and Worton. (Areas 1, 2, 3, 4, 6 & 7)
 - B. Floodplain settlement (in Areas 1, & 5)
 - C. Floodplain land use, landscape and buried channel deposits (Areas 1 & 5)
 - D. Land use on gravel terrace (Areas 1, 2, 3 & 6)
 - E. Studying processes of alluviation (Area 1)

The success with which the evaluation located these elements and the potential for further investigation of them is shown in Section 14.6.2.

4.7.2 To use the data from the evaluation of these elements to begin to answer the following questions which are vital for testing the model which is emerging:

1. Is Neolithic and Bronze Age domestic activity scattered over the remaining floodplain area? Are there any new elements? Are there any greater concentrations? Is there any later occupation?
2. Are there differences between gravel islands on the floodplain or between the extremes of the pit area?
3. Are there any other burial or ceremonial areas?
4. Has, as seems likely, the full extent of second gravel terrace activity been established?
5. What are the differences between gravel terrace and floodplain settlement? Are they largely chronological?
6. Is there any evidence for an early origin for the parish boundary?
7. How good and complete is the evidence for changes in the environment and land use on the floodplain?

The extent to which these questions were answered by the evaluation is discussed in Section 14.6.1.

4.7.3 To evaluate the potential to establish the effects of dewatering and desiccation on waterlogged deposits in the study area.

4.7.4 To pursue the assessment of methods for detecting archaeological sites in floodplain areas.

5. STRATEGY

5.1 Threatened Areas (Figure 2)

5.1.1 Machine trenching (Figures 3A, 3B & 3C)

A 2% sample of the remaining 70 hectares threatened by gravel extraction was evaluated by machine-excavated trenches 30 m x 1.85 m in size and spaced at a maximum of 30 m apart. Only in Field 8 (Figure 2), where weather conditions rendered the gap between harvesting and sowing very short, was this not possible. In this field a 2% sample was achieved in those areas where archaeological features were most dense and at least 1% of the rest of the area was investigated (Fig. 3A). All trenches were normally aligned on the national grid.

Supplementary trenches and small areas were excavated in some areas in order to fully expose less usual contexts, to establish ditch alignments, look for small pit or posthole groups and examine topographical features. Gaps created by the spacing between grid lines and field boundaries were also filled. In total 271 trenches were excavated.

Machine trenching was carefully supervised and trenches were cleaned. Except in a very few cases, for example where time was very limited on the last day of work in Field 8, all features were examined. Fifty per cent of each pit or posthole was excavated and all linear features were sectioned and the profiles drawn. Some features were fully excavated and lengths of ditches dug in order to recover dating evidence. Trenches were planned at 1:100, or at 1:20 where the features merited more detailed recording and, sections were drawn at 1:20. A thorough photographic record was kept. (See Section 6.1 - 6.7 & 6.10).

5.1.2 **Palaeochannel Trenching**

Where possible, trenches situated over palaeochannels were realigned to cut diagonally out of the channel onto the banks, thus optimizing the potential for locating spreads of wood, structures, causeways and so on. To clarify channel sequences a trench was also cut through one channel at right angles (see below Section 6.9). Metal detectors were used to search for objects within the channel deposits. (Section 6.9 & Figs 4B & 4C).

5.1.3 **Parish Boundaries**

Seven trenches were excavated at right angles to the modern parish boundary in order to establish whether earlier boundaries survived along its line and the antiquity of these features. (Section 6.11 & Figs 4A, 4B & 4C).

5.1.4 **Environmental Work**

Field visits and sampling were undertaken by Mark Robinson of the University Museum, Oxford, in order to assess the environmental potential of the site. The quality of organic preservation in channels was also monitored in order to locate potential areas for the study of the effects of dewatering and desiccation on waterlogged remains. (Section 13.9).

5.1.5 **Soils**

Matthew Canti of AML visited the site in order to examine soils in all parts of the evaluation area. A section was selected for X-radiography and a column of samples was taken. (Section 9).

The effects of modern ploughing were assessed.

5.1.6 **Test-pit Sieving**

(Figures 3B & 3C)

Twenty-three 1 m x 1 m test pits were sieved in a N-S transect (on grid line SP 46600) down the slope from the second gravel terrace onto the floodplain

on the west edge of Field 9 and Field 12. Pits were initially spaced at 20 m intervals (from SP 46600/11540 to SP 46600/11200) but this strategy had to be abandoned once the more level ground of the floodplain had been reached because of lack of time (Fig. 3B). It proved possible to excavate only two test pits through the alluvium further to the east in Field 12 (Fig. 3C). As two other transects had been sieved across floodplain gravel and alluvium previously on Yarnton Floodplain (Yarnton Floodplain Evaluation 1991 & Yarnton Floodplain Excavation 1992) it was thought more important to concentrate on those topographies not previously examined by this technique.

The soil was separated by layers and by 0.10 m spits within the layers. It was sieved through a 10 mm mesh. Test-pit numbers were started at 50 in order to have a single sequence for the study area. (Section 7).

5.1.7 Magnetometer Survey

Magnetometer survey was undertaken over a Neolithic rectangular enclosure found in the southeast of the evaluation area (Fig. 20, area 10) and over a linear boundary ditch in Field 11 (Fig. 20, area 11). (Section 8).

5.1.8 Botanical Survey

A survey of the hedgerows within the gravel extraction pit was undertaken by Alison McDonald to assess the number of species present and their potential for dating the boundaries. (Section 11 & Fig. 25).

5.2 Non-Threatened Areas

The results of the evaluation of non-threatened areas are summarized in Section 12.

5.2.1 Geophysical Survey

Geophysical survey was undertaken around Worton Rectory Farm and Yarnton Mead Farm. (Section 8 & Figs 20-3).

5.2.2 Cropmark Plot

A plot at 1:2500 was produced by RCHME of the cropmarks to the west of Worton. (Section 10 & Fig. 26).

5.2.3 Earthwork Survey

It was hoped that earthwork survey in the fields south of Worton would take place as part of the evaluation project. Unfortunately RCHME were unable to fit this work into their survey programme in 1993 but hope to be able to undertake the work in the coming year.

5.2.4 Metal Detector Survey

Metal detecting in transects over the possible areas of Saxon cemeteries was

undertaken by Mike Shott. (Sections 12.3 & 12.5).

5.2.5 Library Research

A brief search of library sources was undertaken in order to establish the extent of destruction by Tuckwell's gravel extraction pit and a visual inspection of the site was made. The location of some of the finds from the pit was established. (Section 12.3).

5.2.6 Botanical Survey

The botanical survey of the hedgerows was extended over the non-threatened parts of the study area. (Section 11 & Fig. 25).

5.3 Use of Earlier Evaluation Work

The results of earlier evaluation work, funded by both English Heritage and the Department of Transport, have been integrated in the current report in order to present the full archaeological resource of the area and have been used in the conclusions. Their results have not, however, been discussed in detail here.

Results of the earlier evaluation work are reported in

1. *Mead Farm, Yarnton, Archaeological Assessment* (report submitted to client January 1991, records held by OAU)
2. *Yarnton Cassington Worton Rectory Farm 1990 / 1 Assessments* (report submitted to English Heritage July 1991),
3. *A40 Witney-Cassington Dualling, An Archaeological Evaluation 1991/2* (report submitted to English Heritage April 1992) and Hey 1993a and
4. *A40 North Oxford Bypass, Archaeological Evaluation Report* (report submitted to the Department of Transport June 1993).

5.4 Dewatering and Desiccation

Waterlogged wood and botanical remains were assessed during the project in order to evaluate their potential to study the effects of dewatering and desiccation on waterlogged remains.

5.5 Evaluation techniques

The potential for developing methodologies for the detection of archaeological sites and past landscapes in floodplain areas was considered during the project.

5.6 Archive

Site records have been archived and checked and a database created of trench, context and finds information.

6. ARCHAEOLOGICAL RESULTS

(Figures 2, 3 & 4)

A 2% sample of the area threatened by gravel extraction was examined by machine trenching and test-pit sieving. In total 70 hectares was investigated; 271 trenches were dug and 23 test-pits were sieved. Trench numbers were allocated by the field in which they lay and these fields were numbered as in the 1990 fieldwalking survey (Figs 2, 3A - 3C). Contexts were numbered in a single sequence within each trench.

The area was quite diverse, both in terms of topography and density and type of settlement evidence. For the purposes of analysis and clarity of reporting it has, therefore, been divided into seven areas which reflect these differences (Fig. 2).

Areas 1 and 2 lay on second gravel terrace. Area 1 lay to the southwest of Worton Rectory Farm where air-photographic and fieldwalking evidence suggested activity in the past. Extensive evidence of both Roman and Saxon settlement was demonstrated by the evaluation here. Area 2 lay to the east of Worton Rectory Farm, between it and the 1990 Cresswell Field assessment, in an area where the gravel was much disturbed by probably late Devensian channel activity. Sparse prehistoric activity was detected here, as well as apparently desultory continuation of the late Bronze Age and Iron Age settlement examined in the 1990 evaluation.

Area 3 lay on the edge of the gravel terrace. There appeared to have been much water run-off from the terrace, partly from the spring line, the soils are clayey and the area is quite wet. Little activity seems to have taken place here in the past.

Areas 4, 5, 6 and 7 lay on the Thames floodplain and prehistoric settlement was attested in all these areas. Areas 4, 6 and 7 were all situated upon higher gravel islands which appeared to be more intensively used in the past. A small, late Bronze Age and Iron Age settlement, possibly continuing into the 1st century AD, was located in Area 4, overlying earlier prehistoric activity which was more difficult to define. A ditch, more than 300 m in length formed its eastern boundary (Fig. 4A). Areas 6 and 7 were contiguous and lay on the same gravel island as Sites 1 and 3 of the Yarnton Floodplain excavations. Evidence of domestic, ceremonial and burial activity through the Neolithic and Bronze Age was recovered from this area. This included a rectangular enclosure, one and possibly two Beaker flat graves and pits containing ?deliberate deposits including good pottery groups (Fig. 4C).

Area 5 was a more low-lying area encompassing palaeochannels, old ground surfaces next to the channels and low areas of gravel. Well-preserved shallow features, causeways, a timber structure, *in situ* finds and trampled

burnt stone spreads were found on an area of preserved ground surface adjacent to the main channel opposite a concentration of activity on Area 6 (Fig. 4C). Otherwise settlement in this area appears to be characterized by small concentrations of features often associated with burnt mound deposits near the channels (Figs 4A, 4B & 4C).

A full description of the archaeological results by trench is given in Appendix I, a table of contexts is provided in Appendix II and a table of finds in Appendix III.

As the area evaluated was so large and a pull-out plan found to be impractical, overall plans at 1:2500 are shown on three separate A3 sheets, which are keyed on Figure 2. Plans 3A, 3B, and 3C show the trench locations; plans 4A, 4B and 4C summarize the archaeological features found and their presumed date.

6.1 Archaeological Results from Area 1

(Figures 4A & 5)

Area 1 was situated to the southwest of Worton Rectory Farm, on the edge of the second gravel terrace. Cropmarks are visible on air photographs (Fig. 26) where ditched enclosures and pits, some certainly Iron Age/Roman, and possible Saxon sunken-featured buildings could be discerned. A Bronze Age ring ditch can also be seen. Prehistoric flint and Roman and Saxon sherds were recovered from the area in fieldwalking.

6.1.1 Neolithic and Bronze Age

No features examined in the 1993 evaluations were conclusively Neolithic or Bronze Age in date. However, four subrectangular features and a deep circular posthole on the edge of the terrace in Trench 234 contained grey clay fills which were clearly different from the Roman and Saxon fills in adjacent areas. A small amount of burnt stone and bone came from these features which cut into a buried ground surface. The gleyed nature of the fills could be the result of the nearby presence of a spring line at the edge of the terrace.

Flints were recovered from later contexts in this area, suggesting earlier activity in the vicinity. For example, two blades, a blade-like flake and a flake came from N-S Roman ditch 239/19.

6.1.2 Iron Age

There appears to have been little Iron Age activity in this area, although two possible middle Iron Age sherds were found in the lower (?medieval) ploughsoil in Trench 277. A ditch in the 1991/2 A40 Witney to Cassington evaluation Trench, J2, contained some possibly Iron Age pot and material

found within some of the Roman ditches in this area could also be late Iron Age in date (see Paul Booth's contribution in Section 13.3).

Fieldwalking produced a small quantity of Iron Age pottery from fields north of Worton Rectory Farm (Fields 6 & 7). However, finds from Tuckwell's gravel extraction pit suggest that the focus of Iron Age settlement lay in that area, spreading to the east in the late Iron Age/early Roman period.

6.1.3 Roman (Figure 6)

Evidence of Roman settlement had already been recovered from the 1991/2 A40 Witney to Cassington evaluation (J1 & J2). This appeared to indicate that Roman occupation was sparse on the western edge of the field. Trenches dug in 1993 immediately to the east demonstrated intensive activity less than 20 m away and illustrate the dangers of extrapolating from a small number of trenches on linear evaluation schemes.

A complex of intersecting enclosure and linear ditches containing several recuts was exposed in Trenches 239, 270 & 308 (Fig. 6) which were, in some ways, reminiscent of the Yarnton Second Gravel Terrace site (YWRF 90). These were part of the enclosure system observed on the air photographs (Figs 4A & 26). A cluster of recut pits in the south of Trench 270 suggests that the dark, circular marks visible on the air photographs could be Roman pit groups. (The maculae were not, unfortunately, investigated because of the lack of an accurate cropmark plot during the evaluation and the presence of a horse ride along the north edge of the field.) Finds recovered from all these features indicate several phases of activity in the early and late Roman periods. The tops of the ditches appeared to have been truncated by (?modern) ploughing and spreads of burnt material over these areas is thought to be the result of the plough cutting and spreading their top fills. Some areas of dark loamy soil in Trench 239 could possibly be the remains of a destruction deposit preserved within medieval plough ridges. It was not possible to trace any of the Roman ditches off the gravel terrace to the south.

A single-faced, T-shaped stone structure (239/25) most closely resembling a corn-drying oven or possibly a pottery drying oven was located in Trench 239. The cropmark plot suggests it lies within a small enclosure. The 'flue' area was, however, narrow at 0.20 m, and no burnt stones were observed. A burnt deposit (239/26) was located to the south yielding burnt stone and two Roman sherds. Possible kiln debris was recovered from the adjacent enclosure ditch and the burial of an infant (239/7) was cut into the top fill of the E-W ditch (239/24).

Further to the east, partially overlying a sequence of recut ditches in the north of Trench 270, was a small stretch of crudely-built wall (270/6). Running north from it was a possible robber trench backfilled with silty

loam, small angular stones and mortar (270/3, 270/4, 270/5) (see section Fig. 6).

Some tile was recovered from Trenches 239 & 270. This was in contrast to the lack of any ceramic building material on the Yarnnton site. This, plus the presence of some stone structures, may hint at a higher status for the Worton site.

6.1.4 **Saxon** (Figure 7)

Two sunken-featured buildings were exposed in Area 1 adding weight to the suggestion that small, pit-like features seen as cropmarks are the remains of Saxon structures.

Structure 231/10 is 4.2 m x 3.8 m, 0.34 m deep and aligned N-S. It has a posthole in the middle of each of the four sides. Building 309/8 is 4.5 m x 4 m, 0.44 m deep and aligned NW-SE. Postholes survive in the centre of the northeast and southwest sides and others were observed around the edge. Opposing quadrants of 231/10 and one quadrant of 309/8 were excavated. Both structures have compacted gravel on the floor of the hut (231/9 & 309/12) and there was a slight suggestion of a hearth in the centre of 309 (309/18) which was located during sampling of the section. This deposit could also be a destruction layer. The bases of both structures were overlain by a very gravelly deposit (231/8 & 309/11) containing charcoal; ridges of gravel were also found around the edge of the sunken area (eg 231/7 & 309/10 on 309/6). Could this be the result of decayed wall material slumping into the feature? The upper fills of these features were filled by ploughsoil and most of the Saxon pottery came from these layers.

Other small postholes and pits found in the evaluation near these structures could be Saxon in date. The features are being truncated by ploughing but survive to a reasonable depth (for example postholes in Trench 231, east of the sunken-featured building are around 0.3 m deep, Fig. 6). Finds preservation from these contexts is good. The comparative density of friable Saxon sherds in the modern ploughsoil, later features and the top fills of Roman ditches indicates extensive settlement activity.

6.1.5 **Medieval**

Although a dense medieval pottery scatter was located during fieldwalking very few medieval features were found during the evaluation, even around the edge of the shrunken Worton village. Evidence of ridge and furrow cultivation was fairly extensive, however, suggesting that the pottery had been spread during manuring of the open fields of the village. Furrows ran both north-south and east-west. Several undated ditches could have been medieval field boundaries.

6.2 Archaeological Results from Area 2

(Figure 2, 4B & 8)

Area 2 lay on second gravel terrace, mostly interspersed with deposits of silty clay, probably the result of late Devensian channel activity. A small amount of Oxford clay was present in the north of the area, capped in places with pebbles displaced from the fourth gravel terrace above. This area lay in Cresswell Field, to the west of the modern farm track.

No cropmarks have been observed in this area and no finds were recovered in fieldwalking. It lay to the west of the 1990 Cresswell Field Evaluation which suggested that the limit of Iron Age settlement lay to the east of the farm track (*Yarnton and Cassington Worton Rectory Farm 1990/91 Assessments*).

6.2.1 Neolithic and Bronze Age

In the centre of the area, in an area of burnt treethrow pits and filling hollows over the tree pits and the natural, was a patchy layer of grey clay silt (52/5) from which burnt stone, fired clay, bone, flint and pot were recovered, including a late Neolithic/early Bronze Age sherd, possibly Beaker (figs 4B & 8). To the southeast (in Trench 56) a ditch 1 m deep (56/18) was located, with an irregular profile and homogenous and hard-to-discern fills. No finds came from the lower fills but a later cut or latest silting (56/14) yielded eleven flakes, a core rejuvenation flake and six chips which suggested a Neolithic date. Nine middle Iron Age sherds also came from this deposit and it was difficult to establish whether the feature was recut or infilled at a later date or whether the flint was redeposited.

A blade-like flake came from a later gully in Trench 57 (57/4).

6.2.2 Late Bronze Age & Iron Age (Figures 8 & 9)

Several features of late Bronze Age and Iron Age date were found. This suggests that the settlement thought to lie mostly to the east of a dry river valley in the east of Cresswell Field may extend further west or even spread sporadically across the terrace (see fieldwalking results from Fields 6 & 7, *Yarnton and Cassington Worton Rectory Farm 1990/91 Assessments*). It is probable that small, isolated areas of activity are represented in Area 2.

In the northeast corner of the area, on high ground (Trench 46) and evidently truncated by ploughing, was a cluster of seven postholes from which a little late Bronze Age/early Iron Age pottery was recovered. This probably represents a structure. Lying west of this area in a natural depression (possibly an ancient watercourse) was a pond or waterhole (45/16) (Fig. 9). The lowest grey clay fill (45/17) contained late Bronze Age/early Iron Age pot and burnt stone. To the south of the 'pond' was a NE-SW aligned ditch (45/15 & 45/19) from which a single sherd of possible

Iron Age pot came. Overlying these features and infilling the hollow was light grey clay (45/12) containing quantities of late Bronze Age/early Iron Age pot as well as four sherds which could be 1st century AD.

To the south, in Trench 49, an E-W ditch (49/6) contained three sherds of probable middle Iron Age pottery. A pit just to the north of this feature was cut from the same level, although it contained no finds.

A deep pit (57/8) in Trench 57, nearer to the late Bronze Age /early Iron Age settlement, contained a dark soil fill with charcoal and yielded a fine collection of 206 late Bronze Age sherds as well as some animal bone and a flint flake (Fig. 8). Carbonized plant remains appeared to be well preserved.

Colluvial deposits were fairly thick on the edge of the slope and, in places, protected a ploughsoil which may have been as early as Iron Age in date. For example, over the late Bronze Age/early Iron Age pit in Trench 57, a ploughsoil layer survived cut by a curving gully from which a blade-like flake was recovered. A similar, deeply-buried deposit was excavated over ??early prehistoric ditch 56/18. Iron Age layers, some apparently ploughed, were examined on the edge of the dry river valley to the east in the 1990 Cresswell Field evaluation.

Some late Bronze Age and Iron Age material was recovered from Roman or medieval ploughsoil 53/2.

6.2.3 Late Iron Age & Roman

Very little evidence of Roman activity was recovered from this area. The upper fill of the 'pond' or waterhole 45/16 yielded four sherds of late Iron Age/early Roman pottery indicating that this water source may still have been used during this period. A shallow E-W ditch in Trench 51 (51/7) contained some Roman pottery.

Very few of the early ploughed layers, which were quite deep on the edge of the terrace, contained datable finds and thus it is impossible to say with any certainty that Roman ploughing took place in this area. However, some lower, tilled layers in the east of the area are very probably Roman in date. (See also test-pit sieving results in Section 7.3).

6.2.4 Medieval

A cobbled trackway ran along a ?natural hollow across the north of the area. It was located in the north of Trench 83 (83/5) and the south of Trench 45 (45/11) (Fig. 9), where two horseshoes were found on the surface. A silting layer overlay it. A ditch to the south in Trench 83/5 could also be medieval in date. The trackway may have linked the villages of Worton and Yarnton.

6.3 Archaeological Results from Area 3

(Figures 2, 4A, 4B & 10)

This area lay on the edge of the gravel terrace. Run-off from the gravel terrace, mostly from a spring line, has resulted in the area being damp and the soils were clays or clay silts. No evidence of past activity had been recovered from this area in previous work.

6.3.1 Neolithic, Bronze Age and Iron Age

There seem to be small discrete, areas of prehistoric activity in Area 3, although much of this was not well dated.

A broad, shallow ditch examined in the 1990 A40 Witney to Cassington evaluation (J3, 3/8) (Fig. 4A) was packed with burnt stone and contained a flint core of ?early Neolithic date. A pit (J3/7) and a ditch (J3/9) to the south were cut from the same level and were possibly contemporary. (See A40 Witney to Cassington evaluations, Figs 27 & 28). Further to the east in Trench 271 were two undated features, a curving gully (271/7) and a linear gully (271/10) which cut into natural and were sealed by colluvium. A later post-medieval ditch in this trench (271/3) yielded a retouched flint, possibly of Mesolithic date.

Several other small features were found in Area 3 cut into the natural or an old ground surface and containing no datable material, for example two shallow ditches (302/6 & 302/11) and a posthole (302/14) in Trench 302 in the east of Field 8 (Fig. 4A). A middle Iron Age sherd came from a NE-SW gully (254/14), a little further to the west, which cut an old ground surface disturbed by burnt treethrow pits and containing a flint flake.

In Field 9 (Fig. 4B), to the north of a palaeochannel a burnt stone pit, oval and flat-bottomed in shape, was located in Trench 70 (70/14) associated with a fairly extensive spread (70/10, extending over more than 14 m) of burnt stone and charcoal filling hollows in the natural and over burnt treethrow pits (Fig. 10). Two flakes, a backed knife and a multiplatform flake core came from this deposit, which most closely resembles the spreads of Bronze Age burnt mound material found during the Yarnton Floodplain excavations (YFP). The burnt stone material was cut by a NE-SW ditch (70/9) from which no dating material was recovered. Another ditch (70/6) was dug a little further to the east before all these contexts were sealed beneath ?early ploughsoil (70/4).

Adjacent to Trench 70 a similar ?buried ploughsoil overlay two gullies (69/13 & 69/15) a posthole (69/11) and a ?pit (69/17). The posthole, which was well-preserved, had a clearly-defined postpipe from which a flint flake, burnt stone and fired clay were recovered. Although hardly diagnostic, this does suggest a prehistoric date for this feature. Redeposited flint and a late Bronze Age sherd were found in ditch 66/12, just to the north.

6.3.2 Roman

Several ditches which appeared to be field boundaries crossed the area. Some of these could be Roman, for example 66/7 and 242/5. Redeposited Roman pot or pot from manuring scatters was recovered from 70/2, and 294/4.

6.3.3 Medieval

Some undated ditches in this area are probably medieval in date. For example 248/5, a N-S ditch, cut through Roman ploughsoil and was sealed by alluvium.

Post-medieval boundary ditches which crossed this area can be identified as field boundaries on old maps.

6.4 Archaeological Results from Area 4

(Figures 2, 4A & 11)

Area 4 lay in the southwest of the gravel extraction pit on floodplain gravel. It is threatened by both road construction and gravel extraction and forms part of the Cassington Floodplain sites (Fig. 1, element 5). Its northern limits were defined by the damp clay silt of Area 3 on the edge of the gravel terrace. The A40 road formed its southern limits. The depth of alluvium along this southern edge and the presence of waterlogged deposits in ditches in this area strongly indicates the presence of a palaeochannel under the road. The eastern boundary of the area was defined by a linear ditch of probable late Bronze Age date running NNW-SSE which was traced through Field 11 and into Field 8. The contrast between the density of archaeological features to the west and the paucity of activity to the east of this ditch is striking (Fig. 4A).

6.4.1 Neolithic and Bronze Age

Neolithic and Bronze Age material was found in this area. A sherd of prehistoric, probably Beaker, pottery was recovered with burnt stone and bone from a small NE-SW ditch (5/6) in the south of the area (Fig. 4A). A Grooved Ware sherd had also been retrieved from a feature, probably a ditch, in the north of Trench J8 in the 1990 A40 Witney to Cassington evaluation. Other features in the area sealed by ?Roman ploughsoil and containing flint flakes and burnt stone or without any finds could be earlier prehistoric in date. For example, a pit containing quantities of burnt stone (295/10) was examined in Trench 295 in the northeast of the area, two postholes in Trench 283 (283/3 and 283/8) also had burnt stone within them and a pit, a posthole and a curving gully were exposed in Trench 11, cut by later gullies, one of which contained a flint core (Fig. 12). These features could equally be late Bronze Age/early Iron Age. Several treethrow pits (for example 6/5 and 13/7) yielded flintwork from their top fills.

Other earlier material was obviously redeposited and, although there is strong evidence for Neolithic and Bronze Age activity in the area, its true nature is difficult to define as the extent of redeposition is unclear. Some of the early activity could be related to tree clearance.

6.4.2 Late Bronze Age and Iron Age

A small settlement was situated here in the late Bronze Age and Iron Age. Groups of postholes, often with postpipes and charred fills, were examined in the west of the area as seen in Trench 266 and A40 J8, 10 & 11 (Fig. 12 & A40 Witney to Cassington evaluation report, Fig. 22) which represented the remains of structures. These features were quite deep, despite ploughing over the top of them. South of the ARC haul road, activity was mostly represented by small linear ditches and gullies which could be interpreted as small enclosures and paddocks. Alternatively they could have been dug to ameliorate the effects of a rising water table. A curving (?house) gully and posthole or small pit were located in the north of Field 10 (Trench 6) (Fig. 11) indicating that this may be the southeastern limit of domestic activity on the site.

Archaeological features extended to the eastern boundary ditch. In Trench 307 in the south of Field 8, a mass of nine intersecting ditches was exposed (307/5, 7, 8, 11, 13, 16, 17, 21 and 24) one of which yielded a middle Iron Age sherd (Fig. 4A). Two postholes were also identified in the trench. A middle Iron Age sherd came from the buried ground surface in Trench 295, to the north. These contexts were sealed beneath probable Roman ploughsoil. Also located beneath the ?Roman ploughsoil and undated was a shallow NE-SW ditch which was traced for 190 m through Trenches 7, 8, 35, 12 and 39 where it cut the large boundary ditch.

Dating many of these archaeological features is difficult; the only datable material is pottery, many sherds of which are small and abraded and in grog-tempered fabrics which are not particularly diagnostic. Some features contained late Bronze Age/early Iron Age sherds and others later Iron Age pottery; a few contexts appear to have pottery which is of 1st century AD date and wheel-thrown. The presence in the same features of flints and burnt quartz stones is curious as these are not artefacts normally associated with late Iron Age/early Roman settlement. A continuation of settlement into the early Roman period cannot be ruled out. Some Roman pottery may be intrusive as a result of ditch digging in the area and the manuring of fields.

A boundary ditch ran NNW-SSE and was traced for 300 m across Field 11 and into Field 8 where it was located with some certainty in Trench 307 and more doubtfully in Trench 295 (Fig. 11). Thence it was not identified. In the north it was fairly shallow and appeared to have only one cut (in Trenches 295 and 16, although in Trench 307 it was deeper and had two cuts) (Fig. 13). The ditch became deeper as it approached the south side of the site and two cuts were clearly visible. Waterlogged deposits survived

within the ditch here in Trench 17 and particularly Trench 37, with quite well-preserved plant remains identified from the fills of ditch cut 37/9 and the primary fill of cut 37/12 (37/11). Mark Robinson suggests that the presence of flowing water snails in the ditch at this point may indicate that the ditch opened into the palaeochannel believed to exist to the south. Dating evidence from the ditch was scarce. A single sherd of late Bronze Age pottery was recovered from possibly redeposited bank material in the top of 16/3 along with a single middle Iron Age sherd. Another middle Iron Age sherd came from latest ditch fill in Trench 39. Fifteen sherds of late Bronze Age/early Iron Age pottery were found within the northernmost section of this ditch (295/5). Flints were recovered from fills at the south end of the field, including a core. Some of these could be derived from earlier activity in the area.

Two middle Iron Age sites were found during the A40 Witney to Cassington evaluations to the south, apparently lying on small islands between palaeochannels. Their character was very much that of other contemporary pastoral sites on the floodplain in the area, for example Farmoor (Lambrick & Robinson 1979) and sites on nearby Port Meadow, Oxford (Lambrick & McDonald 1985). These two Cassington sites are not currently affected by gravel extraction but will be affected by a large road junction planned for this area during improvements to the A40. Their waterlogged deposits may also be at risk from dewatering in adjacent areas. They are discussed more fully below (Section 6.8).

6.4.3 Late Iron Age and Roman

As already discussed, some posthole and gully features in Area 4 contained a few sherds of pottery which appeared to be 1st century AD in date. The possibility of some late Iron Age and Roman domestic activity on this part of the floodplain cannot, therefore, be ruled out.

A ploughsoil was observed in section over most of this area and the few sherds of pottery recovered from it suggest that it is Roman (possibly early Roman) in date. This soil horizon seals the majority of features visible on the 1:1000 plan (Fig. 11). Disturbance by early ploughing is evident from sections across some of the smaller features (section of 266/34, Fig. 12, for example) which, in Trench 266, resulted in the formation of a general spread of burnt material (266/3) over the tops of these features.

Several ditches and gullies probably represent Roman field boundaries. Ditches running NE-SW in the north of the area (for example 291/10 & 286/5) appeared to be associated with the limit of ploughing to the north. A parallel line is followed a little to the south by ditches in Trenches 310, 264 and 262 (Fig. 4A). A sequence of N-S ditches in Trench 17, traced north into Trench 38 where they cut the large boundary ditch, were probably also Roman in date. A shallow ditch (7/6) on the southern limit of ploughsoil in Trench 7 could possibly be part of the same system. Gullies

were located in Trench 11, where the northeast corner of a field, enclosure or paddock with an entrance on the north side was exposed (Fig. 12). Although the features in Trench 11 contained flint flakes they did cut through the probable Roman ploughsoil. The finds could have come from the earlier features which they cut.

A large field boundary running E-W in Trench 310 in the south of Field 8 (Fig. 4A) cut through alluvium, or was open when this layer was deposited. Its fill was alluvial in character and it contained late Roman material. The ditch was sealed beneath further alluvium. This suggests that a phase of overbank alluviation occurred within the Roman period on some parts of the floodplain.

6.4.4 Saxon, Medieval and Later

Three possible sherds of Saxon pottery have been identified in this area; two from a dark spread over postholes in Trench 266 (266/29) and another found in the A40 Witney to Cassington evaluation, Trench J8, in a posthole (J8/18) with Iron Age pottery, bone and daub.

There was little evidence for medieval activity and the spread of alluvium over the trenches suggests that most of the area was receiving flood deposits at this date. Tithe maps indicate that this area was pasture by the 18th century and lay within the field called Worton Cow Common.

Two NNW-SSE post-medieval boundary ditches were traced, the one to the east being a fairly recently abandoned boundary.

6.5 Archaeological Results from Area 5

(Figures 2, 4A, 4B, 4C & 14)

Small concentrations of early features can be identified in this area, many apparently grouped around the palaeochannels. A light but well-spread distribution of small features also survived sealed beneath probable Roman ploughsoil. Dating material from these contexts was, unfortunately, scarce but their stratigraphic position as well as the recovery of flints from these and later features supports an early date for activity over this area. Early material also came from treethrow pits, for example a core rejuvenation flake and a microlith from Trench 99. Later use of the area appears to be represented by Roman field ditches and ploughed fields.

6.5.1 Neolithic, Bronze Age and Early Iron Age

On both sides of a shallow palaeochannel, in the northeast of Field 11, the west edge of Field 12 and the south of Field 8 lay a group of features which

contained burnt stone. One rectangular, flat-bottomed pit in Trench 179 (179/5), also contained two sherds of late Neolithic/early Bronze Age pottery. It was associated with two postholes and two stakeholes (Figs 10 & 4C). Two pits contained burnt stone and flint in the south of Trench 31 and, to the south of the channel in Trench 30, a pit and a posthole contained similar material (Fig. 4A). A gully and a pit in Trench 303, in the southeast of Field 8, also contained burnt stone and flint. Although these features seemed to form a coherent group it should be noted that a NW-SE ditch (31/6) just to the north contained a sherd of middle Iron Age pottery.

Along the north edge of a palaeochannel in Field 9, burnt stone was found within ditches which appeared to be Iron Age or early Roman in date (for example 71/18 & 71/20), probably derived from burnt stone spreads (Fig. 4B). This material was probably associated with a concentration of early activity found in Trench 70, Area 3 (see above Section 6.3.1). Flint was also recovered from later deposits (for example 74/3) in the vicinity.

To the south of the channel in Field 9 burnt stone, fired clay and flint was found in treethrow pits (72/21 yielded burnt stone, fired clay and flint, including an end-and-side scraper, for example), and later ditches (for example 72/11 which also contained some prehistoric pottery). Could this be related to activity around Trench 70 to the north of the channel? A shallow ditch and a posthole in Trench 72, sealed by ?Roman ploughsoil, may be contemporary but are more likely to be related to middle Iron Age activity in this area. Further west, flint flakes and burnt stone were found within treethrow pits (77/10 & 81/8) and a posthole (77/7).

On the northern edge of the main palaeochannel in Field 12 an old ground surface has been preserved beneath a covering of alluvium (Figs 4C & 14). The surface seems to have formed in a low-lying area created by the migration of the channel to the south and mirrors the topography of the Yarnton Floodplain excavation site. Patches of dense, rounded, sometimes burnt quartz pebbles were associated with this surface and flints were recovered from it. For example, in Trenches 216 and 217 eight flint flakes, two blades and a chip with two sherds of probably late Neolithic/early Bronze Age pottery were found even though only a small area was examined. The ground surface survived in an area approximately 240 m long and 50 m wide. Other areas of old ground surface survive west of the channel in the east edge of Field 11 (Fig. 4A), and a small area on the south edge of a curve in the channel (seen in Trench 187) and north of the channel in the northeast of Field 13 (Fig. 4C).

Two causeways, constructed over the channel were found (Fig. 14). The causeway in Trenches 216 and 184 is well preserved (Fig. 15) and made up of two separate, mounded deposits of compacted fine sand and gravel (216/6 & 216/7). Six flint flakes and two blades were recovered from the small section excavated through the causeway, though these finds may be redeposited within it. Alluvium accumulated up against the causeway and

eventually covered it but no alluvium was found beneath. A thin spread of sand and fine gravel observed in the east section of Trench 215 was confirmed as a causeway running N-S across the channel by sections in Trenches 218 & 219. Its survival is patchy but was sufficiently well preserved to demonstrate that it lay beneath probable Roman ploughsoil on the south side of the channel.

At least two lines of postholes were uncovered on the north edge of the channel running NW-SE (Fig. 14). In Trench 207 the lines were 3 m apart but not exactly parallel. Where excavated, the postholes were circular in shape, 0.45 m - 0.58 m in diameter and c. 0.20 m deep and were filled with brown silty clay containing some snail shells. They stopped short of NE-SW ditch 207/17, though whether they respected this ditch or predated it was unclear. Their disappearance may be associated with the edge of the old ground surface here. Trenches 213 & 217 were excavated to trace the alignments to the south but it was uncertain whether the postholes exposed were part of the same but irregular lines or represented other rows. The postholes became more oval in shape as they approached the channel and seemed to peter out in Trench 217. They were reminiscent of the lines of postholes examined on Yarnton Floodplain excavation, Site 2, although much shorter. It should be noted that they do head towards an area of intense prehistoric activity on the south side of the channel (Area 6) (and not directly to the causeway).

On the south side of the channel, in a low-lying area in Trench 187, a row of eight rectangular postholes (1 m x 0.6 m x 0.4 m deep) were found running parallel to the channel cutting an old ground surface (Fig. 14). A probable postpipe was seen in one of the three features excavated. The features were mostly filled with alluvium and a single sherd of late Bronze Age/early Iron Age pot was found in one of their upper fills. On the opposite bank to these features a wooden structure was found in Trench 195 (195/8). It was uncertain whether it jutted out into the channel or ran along its edge. The posts appeared to be driven into slightly organic silts (from which a retouched flake was recovered) and sealed/abutted by inorganic alluvium. The sides of the trench were very unstable because of water pressure along the channel and, despite constant pumping, it was not possible to inspect the sections carefully.

Also running parallel to the channel, further east along its south bank, a row of seven small rectangular wooden stakes c 0.06 m x 0.08 m, probably of oak, were found driven into the natural gravel in Trench 107 (Fig. 4C). As the upper parts of the posts had rotted it was difficult to establish the level from which they had been driven. Revetting at the edge of the channel in the nearby Yarnton Floodplain excavations was Bronze Age in date. These may be of a similar age and possibly related to the post row to the west in Trench 187.

Towards the east of Area 5 an arc of four postholes was found in Trench 98

which were probably part of a house structure (Fig. 4C). They were generally 0.3 m in diameter and between 0.13 m and 0.25 m deep and produced flint (a flake, a chip and a blade) and some fired clay. A considerable quantity of fired clay came from a treethrow pit (97/15) in the adjacent trench to the east. In the northeast corner of the site, north of the palaeochannels, a small animal cremation (Trench 92/6) was exposed.

Isolated postholes and pits were found throughout this area beneath the Roman ploughsoil, which were devoid of datable material (for example in Trenches 101, 104, 174, 198 and 204) (Fig. 4C). The full significance of these features was hard to assess but experience on the gravel island further east suggests that they represent the remains of small-scale, shifting occupation, most probably of Bronze Age date. Running across this area in Field 12 was a shallow NNW-SSE ditch (206/10) containing burnt stone, flint and two late Bronze Age sherds. Two late Bronze Age/early Iron Age sherds also came from the ploughsoil in Trench 173. This suggests that some of the undated features, particularly the groups of postholes, could be late Bronze Age in date. A NE-SW ditch in Trench 171 (171/5) ran roughly at 90° to 206/10 but it only contained burnt stone.

The posthole alignments in Trench 207 approached, but did not reach, a NW-SE ditch. This ditch had a recut and the latest, alluvial fill yielded two flint chips and three sherds of Roman pottery. Earlier cuts could be prehistoric in date.

6.5.2 Iron Age

A few features in Area 5 appeared to be middle Iron Age in date. A NW-SE ditch 31/16 in the north of Trench 31 (Fig. 4A, northeast of Field 11) yielded a middle Iron Age sherd along with burnt stone and bone. On roughly the same alignment as this ditch, to the north lay ditch 303/5 from which burnt stone, flint and three sherds of grog-tempered pottery were recovered which may be 1st century AD. It was sealed beneath the probable Roman ploughsoil, which contained an Iron Age sherd here.

A pit (249/5) in the southeast of Field 8 and sealed beneath ?Roman ploughsoil contained fuel ash slag along with other burnt material including charcoal, burnt stone, fired clay and bone (Fig. 4A). Although this type of slag is not diagnostic of date it has most frequently been noted on Iron Age sites.

Four possible middle Iron Age sherds were found within a gully terminal in the east of the area (72/16) (Fig. 4B). An undated, shallow ENE-WSW ditch and a posthole in this trench may also be contemporary. All were sealed beneath ?Roman ploughsoil. They may be related to the Iron Age settlement in the same field to the east of the farm track.

6.5.3 Roman

Early ploughing seems to have been fairly extensive over this area. This horizon was observed to the west of the palaeochannels in Field 11 and on an island between the channels in the south-east of Field 8, the south of Field 9, the north of Field 12 and the west of Field 13. It was sealed in most cases by later (?medieval) alluvium. The date of the ploughing is supported by a few Roman sherds found during the machine trenching (for example in Trenches 28 & 29) and the recovery of Roman sherds over some of this area in the fieldwalking exercise. However, it is clear that alluviation prevented the full extent of this horizon being detected from the surface. It is possible to suggest the existence of two large fields in this area.

Several ditches in the area appeared to be Roman in date (although, as with earlier phases, the lack of dating material from all types of features has made it difficult to establish the full extent of Roman activity). Very often the ?Roman ditches ran parallel to the palaeochannels and probably defined the edges of the ploughed fields. An example of this is the sequence of ditches excavated at the south of Field 9 which run broadly parallel to a palaeochannel (Fig. 4B). Here preservation of deposits was so good that banks survived in situ. Alluvium filled all but the earliest of these ditches which seemed to be re-dug in an ever desperate attempt to prevent flooding on the field to the south. It was apparent that ploughing was cutting up to the edges of the ditches, ploughing through their banks in some cases (Trenches 81, 78, 82, 79, 76, 72). It should be noted, however, that the only material which came from these features was burnt stone. They could be pre-Roman, possibly associated with the nearby Iron Age site. Other ditches which could be Roman field boundaries running along the edges of palaeochannels were located in Trenches 89, 92, 91, 97 and 207 (Fig. 4C). Some subdivision of large fields could be represented by ditches in Trench 206.

6.5.4 Medieval

An E-W ditch in Trench 68 (68/6) (Fig. 4B) and a NW-SE ditch in 206 (206/8) (Fig. 4C) were the only medieval features recognised in this area. A possible medieval ploughsoil was found, however, within the palaeochannel section in Trenches 107 and 108 and in trenches around Test Pits 76 and 77 (Fig. 4C) and the recovery of a light scatter of medieval sherds from this area in fieldwalking suggests ploughing at some stage, perhaps when pressure on land was greatest in the 13th/early 14th century AD.

A boundary ditch running NE-SW in Trench 303 was post-medieval.

6.6 Archaeological Results from Area 6

(Figures 2, 4C & 14)

Area 6 lies on the same gravel island as Area 7 and Sites 1 and 3 of the Yarnton Floodplain excavations (YFP). Fieldwalking over the area had revealed a flint scatter and a light Roman pottery scatter. Results from the 1991 A40 Witney to Cassington evaluation showed that prehistoric archaeology in the form of pits, postholes and gullies survived to the south of the A40 road on the same gravel island.

Small features were widespread across Area 6 but a concentration of pits and postholes, a well and a grave was located in the centre of the area. Many contexts did not produce datable material. However, good assemblages of material of both Peterborough and Grooved Ware, a small amount of Beaker and late Bronze Age/early Iron Age pottery were recovered from the central group, mainly from pits. It is noteworthy that this activity lies opposite the old ground surface, posthole alignments and causeways on Area 5.

6.6.1 Neolithic

Two pits contained Peterborough Ware. One, a small, shallow circular pit (142/4) contained 13 sherds in the Fengate substyle along with some bone and two flint flakes (Fig. 14). Deep, circular pit 132/9 yielded only one sherd of Peterborough Ware along with fired clay, flint, bone and a large quantity of burnt stone (Fig. 16).

A pit (130/5), containing charcoal and burnt animal bone in the north of the concentrated area of features, yielded several sherds of fine quality Grooved Ware in the Durrington Walls substyle. The quantity of animal bone suggested a cremation. This pit had been lined with clay which was unburnt. A large quantity of fired clay also came from the fill with burnt bone, stone and flint flakes. A larger quantity of Grooved Ware came from a shallow, truncated pit in the south of Trench 149 (149/9) where pottery in the Clacton substyle was encountered with eight flint flakes, one core fragment, a keeled core and burnt stone (Fig. 16).

A pit to the southwest of the same area (148/3) contained flintwork including a blade-like flake which was soft-hammer struck and possibly of earlier Neolithic date (Fig. 14).

6.6.2 ?Beaker (Figure 16)

The crouched inhumation (140/5) of an adult was located in Trench 140. It lay on its left side with its head to the south. It was in poor condition. An abraded, decorated rim sherd, possibly Beaker, was found with it and some burnt stone.

6.6.3 Palaeochannel Deposits

A trench dug next to the western boundary of Field 14 located the palaeochannel running south at this point (Fig. 4C). The channel was not sectioned but part of a trampled spread of burnt quartzite pebbles (158/8) was exposed on its west edge, possibly associated with the area of old ground surface found in the east of Field 11 (Fig. 4A).

6.6.4 Late Bronze Age/Iron Age

A well (141/10) 6.5 m in diameter and 1.1 m deep had been dug in the centre of Area 6 (Figs 14 & 16). Part of a worked wooden object was found in the waterlogged deposits in the bottom of the well and a sherd a late Bronze Age/early Iron Age pottery came from the central fill. Four postholes were found in the north part of this trench (140/15, 140/17, 140/19, 140/21) which were undated.

Four sherds of grog-tempered pottery came from a pit in the west end of Trench 150 (150/5), which may indicate a 1st century AD date. It was sealed beneath the ?Roman ploughsoil (Fig. 4C).

Six sherds of ?early Iron Age pottery were recovered from an early ploughsoil which had slumped into the top of the palaeochannel in the west side of the area (158/10).

6.6.5 Roman

A mixed clay silt layer found universally over this area beneath the modern ploughsoil and over the majority of the features is probably of Roman date. Sherds of 1st century AD pottery were found within this deposit in Trench 148.

A ditch running NW-SE and cutting the ?ploughsoil 142/11 could be a Roman field boundary or may be medieval in date.

6.6.6 Post-medieval

A rectangular enclosure with an entrance to the north is visible in some air photographs just to the north of the A40, and is bisected by it. This ditch was sectioned in Trenches 151 and 157 and found to be post-medieval in date; some clay pipe was found in the ditch. (See comment by RCHME, Section 10.2.5, on site at SP 469107).

6.7 Archaeological Results from Area 7

(Figures 2, 4C & 17)

Area 7 was situated on a gravel island between the Yarnton Floodplain excavations (YFP) and Area 6. Fieldwalking over the area had recovered a dense flint scatter and a single late Bronze Age sherd, as well as a Roman

manuring scatter.

As with Area 6, features were found scattered over the entire area: pits, postholes, gullies and shallow ditches. There were several trenches in the north where no archaeological features were encountered but, as an indicator of lack of activity, this should be treated cautiously as a small ?animal cremation was found in Trench 95, in the north, along with other undated pits and ditches. A N-S ditch was also uncovered in Trench 112, sealed by the ?Roman ploughsoil. In general, however, the greatest density of features was to be found in the southeast of the area and the centre spreading west to Area 6.

As before, many of the features did not contain datable material but the vast majority were sealed by the ?Roman ploughsoil and their classification as prehistoric would be consistent with their general nature and with their similarity to features examined in the Yarnton Floodplain excavations immediately to the east. Some features did contain flint and burnt stone reinforcing this assumption. For example, burnt stone pits were found in Trench 118 (118/5), Trench 166 (166/9) and Trench 155 (155/5) representing a wide spread over the area. A few treethrow pits also contained finds of burnt stone, bone and fired clay.

6.7.1 Neolithic (Figures 17 & 18)

In the southeast corner of the area the ditch of a rectangular enclosure approximately 60 m long and 27 m wide and aligned WNW-ESE was located, sealed beneath the Roman ploughsoil and containing sherds of Peterborough Ware in the Fengate substyle along with flint and burnt stone. This material mostly came from a fill near the top of the ditch (136/4) which could have been a dump (section on Fig. 18). The ditch was first uncovered within Trench 136 running WNW-ESE and sections through it revealed its V-shaped profile. Extra trenches dug to the west located the southwestern corner of the enclosure (in Trench 162) (Fig. 17) and an extension of Trench 136 to the north established its northern return. A length of the southern ditch was exposed to reveal an interruption/entrance in its line 1 m wide, 33 m east of the corner (Fig. 18).

A thin layer of red-brown silty clay (136/3) was found lying to the south of the southern ditch which yielded a multi-platform flake core. It is conceivable that this represents the survival of part of a bank or it may indicate different land use south of the enclosure.

The form of the enclosure was confirmed by geophysical survey (see 8.1, area 10) which also detected a fainter linear anomaly running parallel to and north of the north ditch of the enclosure (Fig. 21). It is known from previous evaluation (Yarnton Floodplain 1991) that a palaeochannel runs NE-SW just south of the modern field boundary. A trench was positioned in the channel near the spot where the enclosure should impinge (Fig. 4C, Trench Y37) but was abandoned when deep, waterlogged deposits were

encountered. However, it seems unlikely that the enclosure could be much longer than 60 m.

In the north of Area 7, a posthole was excavated in Trench 115 (115/9) (Fig. 4C) which contained Peterborough Ware of Mortlake or Ebbsfleet type. It was 0.45 m in diameter and 0.16 m deep. It lay to the east of a ditch running N-S from which no dating evidence was retrieved.

6.7.2 **Beaker** (Figure 19 & Plates 1 & 2)

To the north of the rectangular enclosure, a trench dug E-W exposed a Beaker flat grave (Trench 135). The trench was extended to the west and the south but, although three postholes and a pit (none containing any finds) were located, no further graves were found nor any evidence of an encircling ditch. There was some treethrow disturbance.

The grave (135/6), which was 0.5 m deep, was kidney-shaped and the inhumation, a crouched adult with head to the north and facing east, was positioned curled around the eastern edge (Plate 1, page 5). At the foot of the grave, lying parallel to the lower leg bones, was a large and finely decorated Beaker pot c 270 mm high which, upon excavation in the laboratory, was found to contain a smaller, cruder Beaker tempered with bone which in turn contained a flint end scraper. Six barbed and tanged arrowheads were found clustered together beneath the pelvis of the skeleton. They were not lying pointing in the same direction, as though in a quiver, but their position did suggest they may have lain within a pouch. The grave group is illustrated on Plate 2 (page 5).

There appeared to be a recut or later pit which had been dug into the top of the grave, reaching down to the level of the body (section, Fig. 19). This feature (135/9) was c. 0.8 m in diameter and its function was uncertain.

A little to the north of the burial a large pit was examined in Trench 161 (161/14) which was backfilled with an unusual pale grey sandy clay which was very clean. Cut into or set in the top of this feature was a vertical-sided posthole/postpipe, 0.32 m in diameter and 0.3 m deep. The feature, which was cut by a later, Roman ditch did not contain any finds (Fig. 4C). It could represent a marker post.

A ditch running parallel to the channel in the north of Area 7 (108/12) contained flint and burnt stone and a sherd of late Neolithic/early Bronze Age pottery (Fig. 14).

6.7.3 **Roman**

A mixed deposit of clay silt with some gravel was ubiquitous under the modern ploughsoil. It is believed to be Roman in date and a continuation of the ploughed fields identified in the Yarnton Floodplain excavations to the east. Two sherds of early Roman pottery and an Iron Age sherd were found within the deposit.

Several shallow ditches cutting across the area were Roman in date, probably representing field boundaries. This includes the series of ditches running NW-SE found to the east of the Beaker burial (135/15, 135/18 & 135/23) which were traced to the north (to Trenches 160 & 161) to establish their date and alignment. Two of the ditches were covered by Roman ploughsoil but the latest cut through this soil. A Roman sherd was recovered from one of the ditches. A NE-SW ditch in Trench 125 (125/7) also contained Roman pottery and a N-S ditch in Trench 124 (124/9) and an NE-SW ditch in Trench 108 (108/21, running parallel to the palaeochannel) are also thought to be Roman.

6.8 Cassington Floodplain Sites

(Figures 1 & 4A)

Cassington floodplain sites were first detected from air photographs (PRN 12197). The A40 Witney-Cassington Dualling evaluation (Hey 1993a) demonstrated that the visible remains belonged to an Iron Age settlement, one of three such sites located on gravel islands between palaeochannels. The two southern sites are threatened by road widening and roundabout construction; the northern site is threatened by road construction and gravel extraction. The North Oxford Bypass evaluation and the current evaluation project have shed further light on these sites and the cropmarks have been plotted by RCHME.

The settlement site in the north, at the edge of the floodplain gravel, is described above in Area 4 (Section 6.4) and illustrated on Figure 11.

Further south, lying on low gravel islands between palaeochannels, were two middle Iron Age sites (Fig. 4A, Trenches H1, 3 & 10 and seen in A40 Witney to Cassington evaluation Fig. 22). Both sites were represented by postholes suggesting domestic structures, gullies and larger animal enclosures. A spread of daub, burnt limestone and charcoal next to postholes on the southern site was interpreted as destruction debris from a house. Carbonized plant remains and other finds were well-preserved.

The site to the south is associated with a fairly extensive enclosure system (see A40 Witney to Cassington evaluation report Fig. 8 and RCHME report on cropmarks below (Section 10.2.5)), the site north of this is very contained. Both have strong affinities with small pastoral farmsteads found elsewhere on the Upper Thames floodplain, for example Farmoor (Lambrick and Robinson 1979) and Port Meadow (Lambrick and McDonald 1985).

A few features of uncertain but probably prehistoric date were found in the North Oxford Bypass Evaluation to the east of here (Fig. 4A Trenches N101, N102 & N104), including a crouched inhumation.

6.9 PALAEOCHANNEL TRENCHING

The majority of the trenches cut through or next to the palaeochannels were dug at an oblique angle to the channels in order to maximise the possibility of locating traces of human activity in or along the edges of the channels. A difficulty of this approach was that it depended on knowing the position of the channel before trenching commenced. As it happened, the main channel that was believed to flow through the area (because it is visible on some air photographs and on the ground when the water table is high) did not follow the expected course and, rather than flowing across Field 11, it ran from the south beneath the present A40 road, before turning to the northeast and crossing Fields 12 and 13. The channel observed in Field 11 had a short course running from the south of Field 8 across Field 11 and into the main channel in Field 12. Water running from the second gravel terrace, mostly from a spring line, seems to have created a wet area in the south of Field 8 possibly exacerbated by the existence of a post-glacial palaeochannel here. As well as feeding the channel already described another channel ran east from here across the southern part of Field 9 and into the main channel in Field 13.

Another disadvantage of sections cut at an angle to the channel was that it was difficult to interpret layers running into the channel and thus the significance of related deposits of the channel edge. Sections in Trenches 107 and 108 cutting obliquely into the main channel deposits indicated unusual deposits. Trench 215 was, therefore, excavated across the channel in order to clarify the sequence.

In general the evidence suggests a similar sequence of deposition within the main channel to that established in the Yarnton Floodplain excavations in a channel to the south. Organic silts filled the lowest part of the channel, sealed by inorganic alluvium, putatively of late Iron Age and Roman date. There was only a slight hint in a few places of a slow-down in alluviation in the ?Saxon period when organic sediments accumulated before thicker alluvial deposition occurred. This channel seems to have been more active in the recent past than those previously examined.

Evidence of cultivation soils spilling into the channel, interstratified with the channel sequence, was noted in several places, mostly associated with ploughing on the gravel island to the south (Areas 6 & 7). Roman ploughsoil was present on the south edges of the channel in Trenches 107, 108 and 215, for example, as a brown silty soil with a gritty texture. In Trenches 107 and 108 a phase of ploughing post-dating some of the medieval alluvium and sealed by its latest deposition was located across most of the channel, dipping down into its latest depression. This was characterized by dark, gritty loam containing snail shells (for example 107/19) and may be part of the same episode of ploughing associated with the medieval manuring scatter to the north.

Migration of the main channel to the south seems to have created low-lying areas where a stable ground surface was able to develop during the Neolithic and ?early Bronze Age periods (Fig. 4C). This mirrors the situation encountered on Site 2 of the Yarnton Floodplain excavations. The ground surface has been preserved beneath alluvial deposits and, although not as extensive as that previously investigated, offers well-preserved archaeological features and *in situ* finds recovery.

The smaller channels running from Field 9 were fairly shallow, indicating that they were only active during periods of a high water table or flood. Nevertheless, the earlier prehistoric activity patterns appear to have been influenced by them. Small groups of features were located around the channels, often burnt stone pits or truncated mounds, associated with more widespread and less dense areas of trampled burnt quartz pebbles. These deposits predated the first inorganic alluvium. They are described more fully above, in Areas 3 and 5.

Metal detecting was undertaken along sections through the channel and along stretches which ARC have stripped across the Yarnton Floodplain excavation area. No metal artefacts were recovered by this method.

6.10 LAND USE

6.10.1 Tree Clearance

Treethrow pits were found throughout the area evaluated. Treethrow pits with burning in their top fills, possibly indicating that stumps had been burnt *in situ*, had a more defined spatial pattern. Most of the trenches in the east of Field 11 (Area 5) had burnt deposits in the top of these features and burnt treethrow pits were also observed in Area 7, the southwest of Area 4 and on the southern edge of Area 2. Otherwise these features were largely restricted to wetter ground, such as Area 3 on the edge of the gravel terrace, and along the edges of the palaeochannels. It could be that these groups represent a concerted effort at tree clearance at a relatively late date in an otherwise cleared landscape, though whether as a single operation cannot be ascertained from the evaluation.

The recovery of finds from these features was most common in Area 7, in the southwest of Area 4, and along the southern edge of the palaeochannel in the south of Field 9. These finds were usually of struck flint, especially in Area 4, and burnt stone. In Areas 4 and 7 the finds probably suggest that occupation was already present or immediately followed tree clearance, the hollows serving for rubbish disposal or places where debris accumulated naturally. The value of treethrow pits as receptacles for rubbish which had not been deliberately placed was recognised on the Yarnton Floodplain excavations. The quantity of burnt stone and flint in treethrow pits in Trenches 72, 77 and 81 was notable, although it was unclear whether the

burnt spreads were contemporary or reflected clearance in an area of earlier burnt mound deposition.

On the southern edge of Area 2 (especially in Trench 52) patches of old ground surface seem to have survived in the tops of burnt treethrow pits (Fig. 4B). Flint, burnt stone, fired clay, bone and pot, including a sherd of late Neolithic/early Bronze Age pottery, possibly Beaker, were recovered from these deposits. Does this suggest a date for this clearance?

6.10.2 Buried Ground Surfaces

Other areas of surviving old ground surface were found along the edges of the main palaeochannel, especially in Field 12, where the migration of the channel southwards appeared to have resulted in the formation of a ground surface upon early channel silts. Where excavated, these surfaces produced finds, especially flint. Whether the finds reflect distinct activities on lower-lying ground merits further investigation. Similar surfaces to the southeast in Yarnton Floodplain excavations, also sealed by alluvium, produced *in situ* finds scatters and the preservation of shallow, topsoil features. The potential for the preservation of pollen is being investigated. An area of probable animal trample was exposed in Trench 73 in the south of Field 9, next to the palaeochannel illustrating, once again, the wide range of evidence that can be recovered from channel edges. (Preservation of later, channel-bank activity, for example animal trample and flax retting, has been recovered at Yarnton in the past in these locations.)

6.10.3 Ploughing

Deeply-buried ploughsoil layers were observed in the evaluation, sealed beneath colluvium, in Field 9 but none were positively identified as pre-Roman. Soils which could derive from Iron Age ploughing were detected in the dry river valley in the Cresswell Field evaluation and the survival of contemporary deposits immediately to the west is a distinct possibility. Dating these layers is a difficult task. A mixed and probably ploughed layer which had slumped into the palaeochannel in the west of Field 14 (Area 6) contained six Iron Age sherds.

Evidence of Roman ploughing was widespread, particularly on the floodplain. This may be partly a reflection of the degree to which Roman soils have been disturbed by medieval and later ploughing on the second gravel terrace. Arable cultivation has probably been less intensive on the floodplain in the post-Roman period and Roman soils have, in any case, been partially protected by alluvium. The extent of these soils, their relationship to channels and the location of field boundary ditches enables the limits of individual fields to be identified in some cases. The relationship between the land use, manuring of arable fields, the excavation of field boundaries and the onset of alluviation which is emerging (see for example the south of Field 9) is particularly fascinating as it may shed light on changes in the composition of carbonized plant remains recovered from the Yarnton Gravel Terrace site.

Medieval cultivation was evident to the west of the Worton site on, and on the edge of, the second gravel terrace. Furrows were exposed in most of the trenches and sherds of medieval pottery were recovered from this area in fieldwalking. To the east, colluvium on the side and below the terrace seems largely to have derived from medieval ploughing (judging from the sherds retrieved by test-pit sieving). Medieval sherds in the southwest of Field 8 (Area 4) also suggest ploughing was taking place here in the medieval period. Otherwise it is difficult to judge the extent of arable cultivation in this period. Light pottery scatters recovered in some areas of the floodplain were thought to be the result of manuring ploughed fields but the only sherds recovered from the early ploughsoil in the trenches were Roman in date and, in some places, this layer was cut by Roman ditches (for example in Trenches 135, 160 & 161). Some traces of probable medieval ploughsoils were located on the floodplain in depressions in the channels (for example Trench 158 & TP 76). Medieval soils may have been incorporated in modern ploughing. Documentary evidence suggests that the floodplain areas would have been used mainly for pasture.

6.10.4 Alluviation

There is evidence for overbank alluviation in the Roman period, sealing early Roman features and cut by later ones (for example Trench 310, Area 4). This has particular relevance to land use within the Roman period.

Overbank alluviation, presumed to be of medieval date, was widespread on the floodplain. The only area which appears to have been high enough to escape this event was the gravel island of Field 14 (Areas 6 & 7), although the extent to which modern ploughsoil incorporates medieval alluvium is uncertain. Roman ploughsoil has been preserved in this area.

6.11 PARISH BOUNDARY

Trenches were excavated at 90° to the modern parish boundary in order to establish whether earlier cuts may be present and, if so, whether it is possible to establish their antiquity. In all, seven trenches were excavated: three in Field 9 (Fig. 4B), two in Field 11 (Fig. 4A), one in Field 12 and one trench in Field 14 (Fig. 4C). Investigations were hampered by the presence of a low-slung overhead electricity cable running up the east side of this boundary and a horse ride on the east side of Field 8. It should be noted that the current boundary is not straight and so earlier ditches would not necessarily be expected to lie on only one side of the line.

The success of this strategy was mixed. Earlier cuts were found in some places. For example, in the south of Field 11, a ditch (40/8) running parallel to the parish boundary, was sealed beneath what appeared to be the Roman ploughsoil, although this deposit was more clay and alluvial

than normally observed. Badly preserved organic material from this feature included aquatic plants, seeds of wet grassland and flowing water molluscs. In the south of Field 9 a short trench located a ditch (84/6) which had been cut away by a medieval or post-medieval ditch. Two earlier ditch cuts had survived to the east of the current line of the parish boundary in the north of the Field 9 (Trench 86). The lower ditch seemed to have filled as a result of ploughing nearby, possibly where the plough turned in the northwest of the field.

All of these ditches ran on the same line as the current boundary and were probably, but not certainly, precursors of it. None of them contained dating material and their antiquity is, thus, uncertain. The stratigraphic evidence for ditch 40/8 would appear to suggest at least a Roman date.

Trenches 41, 85, 158 and 214 contained no archaeological features.

6.12 DEWATERING AND DESICCATION

Waterlogged deposits were found preserved within the channels and waterlogged wood was found in two places along their banks and within a late Bronze Age well. The preservation of this material was not of particularly high quality nor, unfortunately, did the presence of waterlogged wood and macrobotanical remains coincide. The potential to investigate the rate of decay in this material remains uncertain.

6.13 PALAEOOLITHIC REMAINS

6.13.1 Palaeolithic Finds in the Yarnton Gravel Pits

R.J. MacRae

A fine, large Acheulian handaxe of the cleaver type was found soon after the pits were opened by ARC. It was on a reject heap. It cannot have originated in the Devensian Floodplain terrace. Its technological features, its condition and its close similarity to 50 flint handaxes found upstream in a higher terrace at Stanton Harcourt, clearly indicate that it predates the Yarnton gravel by at least 100,000 years. Current research in the Yarnton gravels indicates initial deposition at around 70,000 years BP. The cleaver is quite out of context and was very probably used and abandoned on the old land surface long before the gravels were laid down. The Chiltern foothills are known to be the only source of workable flint in the Upper Thames Valley (Roe 1986; MacRae 1988) and Lower Palaeolithic implements, all 700 of them in the valley, were made, either finished or roughed-out, and carried to various sites upstream. The Yarnton cleaver was undoubtedly one of them. A small, worn biface was also found at

Yarnton, of similar provenance. No evidence of Upper Palaeolithic has yet emerged, despite intensive search.

6.13.2 Pleistocene Environment

Beneath the floodplain gravel, which is between 2 m and 5 m thick, thin layers of sandy silt, sandy gravel and weathered clay overlie the Oxford clay. From these deposits more than 500 specimens of vertebrate fauna have been recovered, including reindeer, red deer, bison, horse and mammoth, associated with plant debris. Southampton University are investigating pollen, snails and macrobotanical remains surviving within these deposits.

7. TEST-PIT SIEVING

(Figures 3B, 3C & 27).

- 7.1 Twenty-three test pits were excavated, 1 m x 1 m in size, in a N-S transect (see Section 5.1.6). Very few finds had been recovered from the surface of this area in fieldwalking; a light scatter of medieval sherds was present over the west of Field 9 and occasional Iron Age sherds came from the west of Field 12.

In general terms the greatest density of finds recovered in the test-pit sieving lay on the second gravel terrace and, more particularly on a narrow terrace (now at c 60 m OD) immediately below the main terrace. The differential distribution of finds is also interesting; Roman and medieval sherds concentrate on the gravel terraces and flint and burnt stone on the lower lying areas, below 60 m OD. The only prehistoric sherds recovered came from the middle of Field 9 (TP 59, 60 & 62). The picture is obviously very complex but these overall patterns are worthy of note.

To the south of the palaeochannel, on the floodplain, the very limited test-pit sieving which took place gave results which were similar to those from the other two transects sieved on the floodplain. These are reported and illustrated in *Yarnton Floodplain 1991 Field Evaluation*, Figure 15, and *Yarnton Floodplain 1992 Post-Excavation Assessment*, Figure 14.

7.2 Sites

It is very difficult to locate and define sites by test-pit sieving but the concentration of finds (flints, burnt stone and six late Bronze Age sherds) in Test Pits 60-63 appears significant. The density of flint and burnt stone in the lower colluvium in Test Pits 62, 63 and 64 may suggest that they came from the same site but slightly up slope. This material occurs in an

area which showed a marked absence of features in the machine trenching (Fig. 4B). Could these finds derive from a ploughed-out ground surface similar to that uncovered in Trench 52, where it had been preserved in the tops of treethrow pits?

Further south, in both Test Pits 74 and 76, the presence of flint and burnt stone in early ploughsoil and treethrow pits beneath it is probably part of burnt mound deposition and other related activities on the edge of the channels. Is this linked to tree clearance?

7.3 **Early Layers**

The sieving demonstrated the patchy survival of an early ploughsoil, sealed by colluvium on the lower part of the slope off the terrace, to the north of the palaeochannel (TP 57, 58, 59, 60, 61, 63, 65, 66 & 67). This ploughed field seems to lie on a narrow terrace below the slope of the second gravel terrace. This layer was very difficult to date as the only finds recovered from it were burnt stone, flint, fired clay and six late Bronze Age sherds. Previous experience suggests that this ploughing is Roman but the absence of Roman sherds and the proximity of the field to the Iron Age site in Cresswell Field where there is an indication of Iron Age ploughing, must allow the possibility of Iron Age arable in this area.

Immediately to the north of the palaeochannel ploughing stops and a layer which has been interpreted in the trenching as trample was located (TP 69 & 70). In the machine trenching burnt stone was found associated with this layer. A single Roman sherd was recovered in the sieving (TP 69). Further evidence of Roman ploughing came from Test Pits 74 and 76, on the floodplain where medieval alluvium had sealed an earlier ploughsoil. No datable finds came from the ploughsoil but Roman sherds found in this deposit elsewhere indicates it is Roman in date.

7.4 **Medieval Ploughing**

On the top of the terrace a thin layer of soil survives beneath the modern ploughsoil which is clearly the result of earlier ploughing. Plough furrows could be seen cutting into the natural and the soil is badly sorted. A small amount of medieval material was found within this layer (TP 50, 51 & 52). The results of the test-pit sieving confirm observations of the extent of colluviation made in the machine evaluated trenches and this deposit was seen in all test pits from Test Pit 53 to Test Pit 70. The variable depth of this deposit, as it filled hollows on the edge of the terrace and moved differentially down the slope, was also attested. In some places two distinct horizons of colluvium could be seen. Medieval material found within this deposit, even the lower horizon (as in TP 62 & 63), suggests colluviation is of this date and this is supported by the presumed medieval ploughing on the top of the terrace. Some medieval sherds in colluvial deposits may have been transported downhill in later ploughing events. There was, however,

no post-medieval pottery in these lower layers with the exception of a single 16th-18th century sherd in the top of the colluvium in Test Pit 58, and records (tithe maps and the Victoria County History) suggest these fields were pasture in the post-medieval period and remained so until recently. The greatest concentration of finds within the colluvium lies at the bottom of the slope from the second gravel terrace where soil has accumulated on a narrow terrace (TP 60, 61, 62 & 63).

7.5 **Alluvium**

Two pits were examined on the edges of the channels further south (TP 76 & 77). No finds were recovered from TP 77 but the burnt stone and flints found in the lower levels of TP 76 demonstrated again the degree to which alluvium seals earlier soils and prevents the movement of finds.

7.6 **Modern Ploughsoil**

The extent and quantity of slag in the modern ploughsoil is notable. Its presence explains problems encountered in the magnetic susceptibility surveys undertaken by the Archaeometry Branch of AML (see Section 8.2). This material may have come from the railway sidings.

The density of finds in the modern ploughsoil on the second gravel terrace is markedly greater than that found on the floodplain, perhaps reflecting the greater intensity of cultivation and hence manuring here, especially in recent years. Much of the material is modern. The greater number of Roman sherds in the modern ploughsoil as compared to lower layers is something of a mystery. There does appear to be a correlation between the sherds and the quantity of slag and coal. Could these sherds have been displaced from the Yarnton Roman site by the railway construction and then transported up slope with the slag?

8. GEOPHYSICAL SURVEY

Neil Linford

8.1 Synopsis of work to date

Figure 20 details the areas covered by geophysical survey in three campaigns of fieldwork undertaken by the Ancient Monuments Laboratory. Each campaign consisted of two weeks in the field and was augmented by a number of subsequent site visits to observe the excavation of previously surveyed areas. Currently 15.4 ha of the site have been surveyed with a magnetometer at a sample interval of 0.25 x 1 m; 2.4 ha have undergone twin electrode (0.5 m mobile probe separation) resistivity survey at 1 x 1 m sample interval; and 0.5 ha has undergone electromagnetic conductivity survey at 1 x 1 m sample interval. Variations in topsoil magnetic susceptibility have been assessed by both laboratory and field measurement over a number of linear transects and coarsely sampled area surveys. Soil samples, recovered during the excavations by OAU from cut features, were also processed by the AML as part of a research project into the characterisation of mineral magnetic profiles from archaeological sediments (Linford in prep.). The areas covered by geophysical survey are detailed below and shown in Figure 20.

Area 1, Area 2 April 1992

Both areas consisted of detailed magnetometer and resistivity survey over 2.4 ha previously evaluated by OAU trial trenching. Topsoil and subsurface soil samples were also recovered to evaluate magnetic susceptibility contrasts.

Area 3 April 1992

A trial 60 x 60 m magnetometer survey over an area identified from Aerial Photographic evidence.

Area 4 April 1992

A trial 60 x 60 m magnetometer survey over an area identified from Aerial Photographic evidence.

Areas 5-8 November 1992

After an extensive magnetometer scanning survey throughout the Hay Day field area the recorded position of potential anomalies led to the detailed magnetometer survey of these three areas. Extensive topsoil magnetic susceptibility transects were also collected from this part of the site (see Fig. 20).

Area 9 November 1992

This area was selected to test the geophysical response of the site remote from the floodplain.

Area 10 November 1993

Magnetometer survey over a Neolithic enclosure on the floodplain identified by OAU trial trenching. (See also 6.7, Neolithic Features)

Area 11 November 1993

Magnetometer survey of a ditch identified by OAU trial trenching.

Area 12 November 1993

Detailed magnetometer and Electromagnetic survey over the earthworks and surrounding area at Worton Rectory farm.

Area 13 November 1993

Detailed magnetometer and topsoil magnetic susceptibility survey over the possible early medieval settlement and the Saxon burial ground and surrounding landscape at Mead Farm, Yarnton.

8.2 Discussion of results

The geomorphological conditions within the floodplain and surrounding areas present a particular challenge to traditional geophysical techniques used to identify archaeological activity. This is exacerbated by the contrast between the disappointing results from areas 1 and 2 (despite the presence of extensive Neolithic and Bronze Age activity revealed in excavation) and the relative success of the survey over the Neolithic enclosure (in area 10) only 100 m to W. Whilst spectacular results have been gained from parts of the site, Mead Farm (Figs 22 & 23) for example, the accurate prediction of where geophysics will provide useful information remains a somewhat elusive Grail.

Pilot magnetometer survey in advance of gravel extraction work is still recommended in all areas of the site as the results from the floodplain have shown that both the depth of alluviation and the success of geophysical survey techniques can vary widely within a comparatively small area. This could be done by private sector geophysical practitioners. The use of topsoil magnetic susceptibility measurements or magnetometer scanning surveys is not recommended due to the influence of modern landuse over much of the cultivated fields comprising the floodplain area. This disturbance can be attributed in part to the railway track which formerly crossed the site

and to the current practice of distributing organic refuse over the site to 'enrich' the topsoil. Figure 21 shows the extremely weak response from the Neolithic enclosure on the floodplain and illustrates the problems of modern ferrous interference and the difficulty faced when trying to detect similar anomalies during a scanning exercise.

(For discussion of the results of geophysical survey in non-threatened parts of the study area in conjunction with other data, see Section 12).

8.3 Further research

Areas for further research are discussed below (Section 15.10). It is hoped that, in addition to completing the final reports from the geophysical surveys conducted so far and the publication of the mineral magnetic profiling work, a further period of fieldwork will be conducted in the latter half of 1994.

9. SOIL STUDIES

Matthew Canti

Soil studies at Yarnton have consisted mainly of attempts to define stratigraphic integrity by particle size analysis — i.e. to assist in the correlation of deposits between different parts of the excavation. These have been unsuccessful due to significant differences of grain size distribution over short distances in deposits believed to be of similar origin. This has led to questions about the way in which the sediment thickness has built up (?seasonal, annual or longer term cycles; ?individual episodes as against constant accretion etc). To assist in answering these fundamental questions, another technique is needed to define the edges of the sedimentary units. X-radiography can be used in this way since it provides a density map of the selected sediment. The idea is to take away thin slices of a section and build an X-ray map which can be used either for producing new interpretations based on density, or for targeting fresh analytical sampling such as micromorphology or particle size analysis.

A 60 cm x 100 cm section has been sampled from the palaeochannel bisecting the Yarnton Floodplain excavation site (and lying to the east of the Neolithic rectangular enclosure) by removing 40 contiguous 20 cm x 8 cm monoliths in a grid pattern. These are now being cleaned and X-rayed before producing the density plan and proceeding to any analytical work arising from the new data.

10 RCHME CROPMARK PLOT **Roger Featherstone & Carolyn Dyer**

10.1 Summary

This report concerns the air photographic survey of plough-levelled archaeological features in the vicinity of the hamlet of Worton in the parish of Cassington, Oxfordshire.

All those photographs which were easily accessible were examined in detail and photogrammetric plans prepared at 1:2500 of all the archaeological features visible.

10.2 The 1:2500 Air Photographic Transcription

10.2.1 Objectives

The purpose of the survey was to interpret and transcribe at 1:2500, all archaeological features showing as cropmarks (excluding ridge and furrow), seen on readily available aerial photographs. Rectification of the photographs was undertaken using AERIAL 4.20.

The final objective was to produce an accurate photogrammetric plan in the form of an overlay to the O.S. 1:2500 maps.

10.2.2 Definitions

For the purposes of the present survey, plough-levelled features are defined as those which have been recorded by aerial photography as differentially coloured or textured marks in bare ploughsoil, arable crops, grass or any other form of vegetation. The surviving earthworks in the area were not plotted.

10.2.3 Photographic Sources consulted

For the purposes of this survey, all the specialist oblique air photographs in the National Library of Aerial Photographs (RCHME) were consulted as well as two 1946 RAF vertical photographs. The collection held by The Cambridge University Committee for Aerial Photography (CUCAP) was also consulted, and all of their relevant cover examined. Two 35mm colour prints held by the Oxford Archaeological Unit were also examined.

It was not possible to carry out an exhaustive search for further photography which may be held by commercial air survey companies or private individuals. Although it is possible that some such coverage exists, it is unlikely to contain significant amounts of archaeological information not already recorded on the air photographs which were available for consultation.

A listing of the oblique and vertical air photographs consulted, giving location and date for the obliques and source, original sortie number, date and scale for the verticals is held by OAU and RCHME along with digital files created during the course of the survey.

10.2.4 Survey methods and techniques

Due to the need for accuracy it was decided to produce plots of the various archaeological features using computer-aided rectification from various aerial photographs. This was achieved through the use of the AERIAL software published by the University of Bradford which uses plane transformation techniques offering metrical precision in the region of $\pm 0-2\text{m}$ at 1:2500. The residual errors recorded in rectification of the archaeological features were not greater than $\pm 2\text{m}$, and were generally below $\pm 1.0\text{m}$. Field control was derived mainly from current edition O.S. 1:2500 plans although some control had to be taken from the earlier O.S. 6" maps due to significant changes in field boundaries.

Unfortunately, many of the photographs used were not particularly suitable for digitising. Some were quite oblique, resulting in distortion of the final rectified plot in one direction. Many of the photographs had been taken from different directions and the resulting plots in some cases did not match up too well.

Some of the photographs also had very poor control, either due to the thickness of the field boundaries or the complete absence of control points across half of the image. In these cases field boundaries had to be extrapolated in order to create false control points.

Known boundaries and drains were digitised from the photographs and compared with the base maps, and these indicated that despite the problems of control, the resulting plots still retained a relative degree of accuracy.

In the course of the survey seven separate photogrammetric plots were prepared all of which were incorporated into the final drawing. The digital data files for these are held by RCHME.

10.2.5 Description of features transcribed

For the purposes of this report, the archaeological features plotted have been split into five areas, based on field boundaries. Each field unit is referred to by a six figure grid reference, centred on the archaeology.

SP459111. NAR No: 12 SMR Nos: 12932 and 1346
(Figure 26)

The cropmarks in this field clearly represent prehistoric settlement features, including enclosures, hut circles and pits. The large dark feature

or macula at SP45981108 is possibly a crop mark palimpsest of several recut hut circles.

At SP45951105 is a large, irregular, rectilinear enclosure (78 x 60 m) containing between eight to ten smaller, subcircular and rectilinear enclosures. On many of the photographs, the western side of this large enclosure shows up as a wide ditch. However on photograph SP4511/1 (NMR), it can clearly be seen to be double-ditched.

To the NE of the settlement enclosures, at SP461112, lies a concentration of widely scattered pits.

SP460114. NAR No: 12 SMR No: 11346
(Figure 26)

As with the previous site, these crop marks clearly represent settlement features, although the absence of hut circles perhaps suggests a later date. There are numerous pits and larger maculae across the site and many of the larger features clearly have the rectangular shape often associated with sunken-featured buildings.

Other features of note include a rectangular enclosure at SP4594511155, 16 x 6 m in dimensions; a rectangular macula at SP4594511185, 14 x 5 m in size; a large ring ditch, 22 m in diameter, at SP46061139, probably a Bronze Age round barrow, and, at SP45981146, a large, oval macula.

The settlement features, which primarily consist of conjoined rectilinear enclosures, are unfortunately confused due to the presence of irregular frost cracks crossing the field at this point. The most obvious of these geological marks have not been plotted, but in the immediate vicinity of the settlement around grid reference SP45991140, it is unclear whether some features are natural or archaeological and therefore some more natural-looking features have been plotted.

SP461104. SMR Nos: 10749 and 12197
(Not illustrated)

The cropmarks in this field unit show the remains of five, possibly six, subcircular enclosures and to the north at SP46131038, a right-angled ditch, possibly part of a large rectilinear enclosure. [The features are part of the Cassington Floodplain sites, Fig. 1, element 5]. The subcircular features are probably settlement enclosures and one, at SP46111035, is clearly double concentric, probably a hut circle and outer palisade trench.

In the corner of the field at SP46151036, there is a large enclosure with an entrance to the east. At this point, the cropmarks are indistinct, but there appear to be curvilinear features within the outer enclosure, again probably hut circles.

To the north of this field at SP46061045, are a number of irregular linear features. Although some appear to be fairly straight and have smooth, almost right-angled bends, they are likely to be natural frost cracks.

SP463105

(Not illustrated)

This site consists of four linear ditches, two of which appear to form part of the same rectilinear feature. [The features are part of the Cassington Floodplain sites, Fig. 1, element 5]. The westernmost linear is visible as an extant ditch on the 1946 RAF vertical photographs and indeed is marked as a field boundary on the 1:10,560 O.S. map of the area. This feature is on exactly the same alignment as the easternmost ditch, which may therefore be a fairly modern field boundary.

SP469107. NAR No: 14 SMR No: 1382

(Figure 4C)

This site comprises of three sides of a rectangular enclosure, cut by the Oxford Northern By-Pass. The corners of the enclosure are fairly rounded and it clearly has an entrance halfway along its northern side. The site only appears on two photographs, both taken on the same occasion in 1933, when it appears as an earthwork. Although the scope of this survey was to plot crop mark sites, this site has been plotted as it lies just within the survey area.

10.2.6 Archaeological Features Not Plotted

Extant earthworks of the deserted Medieval village at Worton were visible on some of the photographs at SP453113. These were not plotted however, as they were outside the specification of this particular project, which was to plot plough-levelled archaeological features only.

A large ring ditch had previously been plotted on the 1:10,000 scale NMP survey by RCHME. This feature was only visible on the 1946 RAF verticals and then only as a very indistinct feature. It was therefore decided not to include it in this survey.

11. BOTANICAL SURVEY

Alison McDonald

The hedgerows of the Study Area were assessed by field examination at 30 m intervals. The results are plotted on Figure 25.

The number of species within a 30 m stretch of hedge may, generally speaking, indicate its antiquity. Exceptions are:

1. hedges in which elm used to be dominant and the suckers are now a major component to the exclusion of other species
2. old boundaries marked by willows, now fenced and colonised by one or two other species. In this case the boundary is usually a stream or, in the case of the western boundary of West Mead, Yarnton, which is the parish boundary, a ditch between longitudinal hay lots
3. old species-rich hedges in fields grazed by cows or sheep and which have been neglected for many years. The animals browse the trees and shrubs which tend to die earlier than they might otherwise and regeneration of seedlings is prevented by grazing

In all cases evidence of antiquity must also come from documents.

The hedges around Yarnton Mead and Stage 4 are particularly interesting because of their species-richness and the double ditch and wide bank, an arrangement which is also found on Wolvercote Mead. Documentary research on whether the enclosure of these fields predates the 17th century when Yarnton is known to have been divided could be very rewarding. The fields to the west are called Hay Day which may indicate Saxon enclosure; hay meaning hedge (Margaret Gelling pers. comm.). This would have particular significance for the understanding of Saxon land management.

The position of the hedges around the Cassington Floodplain sites suggests that they were put in around existing hay lots when the meads were enclosed. The date of this is, at present, uncertain. The species here include willows, so that the fact that there are three species or less may not necessarily mean they are early 19th century.

12. NON-THREATENED AREAS

(Figure 1)

12.1 Worton Rectory Farm Cropmark Site

The cropmark site at Worton Rectory Farm lies on second gravel terrace. Planning permission for gravel extraction has only been granted for the southern edge of this site, although the proposed Cassington spur road will cut through its western edge. The land has been ploughed over many years but fields north of the modern path (Fields 6 & 7) have recently been converted to paddocks for animal grazing. Tuckwell's gravel pit lies to the west (Fig. 1).

The cropmarks, described in Section 10 (10.2.5) and illustrated on Figure 26, coincide with a dense concentration of finds recovered during fieldwalking. The Oxford University Archaeological Society found Romano-British pottery on the site in 1970, and Jane Randall of Cassington has more recently recovered a few Saxon sherds. Surface collection by OAU in 1991 recovered struck flint, two early Bronze Age pottery sherds, and Iron Age, Roman, Saxon and medieval pottery, reflecting the density and complexity of the cropmark evidence (*Yarnton and Cassington Worton Rectory Farm 1990/91 Assessments*). Finds distributions mirrored the cropmark pattern, with a particularly dense group of finds in the centre and north of Field 6, largely of Roman date, and another cluster in the northwest of Field 8. Saxon sherds were widespread across the area and of surprising density, given the friable nature of this pottery. They were most numerous in Field 6 but also extended along the northern edge of Field 8. Medieval sherds were ubiquitous.

The majority of the flints and the early Bronze Age sherds lay in the area of the ring ditch which is clearly visible on all air photographs. Another possible ring ditch can be detected at the western edge of this field, but its existence is uncertain (see above 10.2.6). Further ring ditches can be seen to the west near the junction of the Hanborough and Cassington roads at SP 455115. The interest of these features is enhanced by the discovery of ring ditches on the gravel terrace in the Yarnton area (see below 12.4).

A little Iron Age material was recovered from fieldwalking in Fields 6 and 7 but no features pre-dating the 1st century AD were found in the evaluation trenches. It is possible that the spread of small-scale Iron Age activity, as detected in the north of Field 9 (Area 2), continued across the edge of the gravel terrace. Finds and records of features made in the 1930s in Tuckwell's gravel pit 300 m to the west (Leeds 1935) suggest that Iron Age settlement was fairly dense there. A vessel decorated with swags was notable (Harding 1972, pl 67, A). The Iron Age village probably lay in this area.

The presence of late Iron Age and Roman settlement at Worton is not in

any doubt. The arrangement of the cropmark features is characteristic of Roman rural settlement in the Upper Thames Valley and the presence of dense Roman pottery spreads on the surface along with the excavated evidence (see above 6.1.3) strongly supports this interpretation (Fig.26). If this site follows the recognized model the cropmarks to the southwest would indicate 1st and 2nd century AD activity with a shift in settlement in the ?late 3rd/4th century to a new site (in this case to the north) with a more rectilinear layout. A possible trackway running along the south edge of this group of features connecting the site to a wider network of tracks linking small, rural communities would be typical of sites of this date. However, some caution should be exercised, as a comparison with the Saxon settlement layout at Yarnton indicates some similarities in spatial patterning of the features. At Yarnton (Fig. 24) dense and complex Iron Age and Roman features in the west of the site gave way to an area of less intense activity where sunken-featured buildings were located. East of the sunken-featured buildings, a rectilinear arrangement of enclosures was originally thought to be of late Roman date but was found to be a middle Saxon settlement overlain by Saxo-Norman field system. It is conceivable that a similar settlement pattern exists at Worton and the pottery scatter would fit this hypothesis. It is noteworthy that the orientation of the northern cropmark group is more similar to that of the modern hamlet than to the southerly cropmarks. The validity of this theory can only be tested by excavation.

Saxon activity is clearly present on this site, whether or not the enclosures to the north are Saxon. It had already been suspected that large pit-like features visible on air photographs were sunken-featured buildings and that the presence of Saxon pottery reinforced this. The exposure of two sunken-featured buildings in the evaluation trenches in the north of Field 8 confirmed this view. The area of early Saxon activity evidenced by these features is, therefore, extensive. Of considerable interest is a small rectangular feature c 16 m x 6 m located at SP 4594 1115, just to the north of the putative late Iron Age/early Roman site. Another similar-sized feature lies to the north of it. These features are of the same dimensions as the timber halls which were excavated on the Yarnton Gravel Terrace site. If they represent comparable structures, however, these must have had different foundations from the excavated post-built structures seen in the east of Figure 24.

The medieval sherds on this site probably result from the manuring of this area, which is known to have been part of the open arable fields of the settlement. Ridge and furrow was found in evaluation trenches in the north of Field 8 and can be seen on Allen air photographs (for example Allen 260, Ashmolean Museum). The density of finds is not great enough to suggest medieval occupation beneath the fields, except possibly in the south of Field 7 and very few medieval features were found in this area. Finds recovery was more dense in the Yarnton Mead Farm scatter, for example.

12.2 Worton Rectory Farm Medieval Village

The geophysical survey at Worton covered the area around the southern edge of the modern hamlet, where earthworks, including possible house platforms and hollow ways, have been observed (PRN 5539). These have been attributed to the medieval village, the full extent of which is uncertain. Tithe maps, which merit further investigation, indicate that more buildings stood in the 18th century than survive today.

Cropmarks of a few rectilinear plots can be observed to the south of the hamlet on some air photographs (for example NMR 5539) but, as a result of a misunderstanding, these have not been plotted. As stated above (section 5.2.3) topographical survey has not yet been undertaken.

Although one small field is now ploughed, none of the area was under cultivation during the fieldwalking project and, therefore, no surface collection has taken place. Medieval pottery and tile can, however, be observed on this field.

The results of the geophysical survey were disappointing, possibly partly because the survey lay on the slope off the gravel terrace where the soils seen in the evaluation trenches were damp and clayey. Modern iron objects also confused the picture. A few N-S linear anomalies were detected.

12.3 Worton Saxon Cemetery

The Saxon cemetery at Worton was first detected during the extraction of the Tuckwell's gravel pit in the 1930s and seems to have been very largely destroyed by it. Metal detecting on transects across the site picked up no large anomalies and finds that were detected were of 19th century and modern rubbish, probably from the backfill of the pit. It would seem that the pit extended almost to the boundary with the Worton Rectory Farm land. It is possible that the Saxon cemetery extended further to the W and may survive beneath housing here.

12.4 Yarnton Mead Farm

The geophysical survey at Mead Farm, Yarnton lay over an area which was known to include a Saxon cemetery. This site was found during gravel extraction in the 19th century but its full extent, and hence the extent of its destruction, are uncertain. Field evaluation by OAU in 1991, in advance of tree planting, indicated that the gravel quarries were extensive. The area lies between the middle Saxon settlement excavated in the Yarnton Gravel Terrace excavations and the known medieval centre of the Yarnton village around the church and the manor. A green lane runs from Mead

Farm to the meads on the north bank of the Thames where a ford used to exist.

Six pieces of struck flint and four burnt flints were found during fieldwalking over this area (Fields 16 & 17), including a thumbnail scraper. Two sherds of Saxon pottery were also recovered immediately to the west of Mead Farm (in Field 16) in the same field in which Mike Shott found two Saxon brooches and an enamel stud whilst metal detecting. The brooches were of both early and late types (identified at the Ashmolean Museum) and the stud was in the ninth to tenth century Irish metalworking tradition (identified at the British Museum). These are significant finds, but may indicate the extent to which the Saxon cemetery has been disturbed. Quantities of medieval pottery which were collected during fieldwalking to the east of the green lane were great enough to suggest medieval occupation.

A circular anomaly, possibly a double concentric ring ditch, was located at SP 4780 1144. An anomaly was also present in its south ditch (Figs 22 & 23). Further to the south a subcircular anomaly can also be seen at SP 4783 1130, though this is less certainly an archaeological feature.

A rectilinear field system can be observed in the central area of the survey. Its truncation to the W is probably the result of 19th century gravel extraction which has already been attested in field evaluation (*Mead Farm, Yarnton, Archaeological Assessment* 1991) and is visible here in irregular magnetic readings. The disappearance of features on the plot to the southeast is probably attributable to a covering of alluvium where features cross onto the floodplain. This is unfortunate as the greatest density of medieval finds recovered in the fieldwalking project lay in this area. A deeper ditch may have been detected as a faint linear anomaly, NNE-SSW.

Ditches appear to curve round the two circular anomalies noted above, suggesting the relative antiquity of the ?ring ditches. The curving boundary in the south may follow the contour of the second gravel terrace.

It is clear that at least two phases of field layout are represented. The clearer, more regular NNE-SSW aligned features are probably associated with the medieval layout of the village, as they would fit well with the orientation of field boundaries around the medieval church and manor house. The existence of overlapping boundaries on this NNE-SSW orientation may indicate longevity of use of this arrangement.

Further from the church, southwest of Mead Farm, the orientation of ditches becomes more E-W/N-S. This may reflect the changing topography on the edge of the gravel terrace, but the existence in the north of the survey of an E-W ditch sharing the same alignment may suggest a different and ?earlier field system.

The field system stretches S to the railway line, except where destroyed by gravel extraction. The more southerly orientation revealed in the survey matches well with the Saxo-Norman field system investigated on the Yarnton Gravel Terrace site (Fig. 24).

Few Roman field boundaries were identified in the excavations to the east of the Yarnton Roman settlement. The trackway and the small enclosures on its east edge, however, were orientated NE-SW. Extreme caution should be exercised over interpreting the age of the boundaries from their alignment as the gravel terrace curves in this area and the boundaries may simply reflect this change.

The potential for the survival of early medieval occupation, completing the chronological link between the middle Saxon settlement excavated on the Yarnton Gravel Terrace site and the medieval centre around the church, would seem to be very good.

The recovery of earlier prehistoric features in the form of one and probably two ring ditches in this area was an unexpected bonus of the survey. This discovery begins to fill out the picture of the use of the second gravel terrace in the area in the prehistoric period. Another ring ditch located from the air just to the west of the church (Cambridge AFU 65) indicates that these are not isolated features in the early landscape. Parallels can be drawn with the Stanton Harcourt area, where a ceremonial complex of barrows and other monuments was located in the centre of a gravel terrace, later used as grazing land and ringed by Iron Age and Roman settlements (Lambrick 1992).

12.5 Yarnton Saxon Cemetery

Geophysical survey and metal detecting over this site failed to pick up any anomalies that could reflect graves with metal grave goods. The metal detecting survey was particularly quiet.

12.6 Yarnton Mead

Investigations by OAU in advance of road widening in this area indicated that prehistoric features and finds found to the north of the A40, in the gravel pit, extended into these areas.

The A40 Witney-Cassington Dualling evaluation exposed a ditch, two gullies, four postholes and three pits in two 30 m trenches (H16 & H17, Fig. 3C), lying beneath an early ploughsoil. A sherd of late Neolithic/early Bronze Age pot was recovered. A NE-SW ditch examined in the A40 Oxford Bypass evaluation (Trench N107) contained a broken flint flake. These features and finds undoubtedly represent a continuation of prehistoric

activity located on the gravel island in Field 14.

The palaeochannel which bisected the Yarnton Floodplain excavation area ran south onto Yarnton Mead. Trenches east and south of the channel demonstrated the continuation of the ground surface from the excavation site, sealed beneath alluvium (Trenches N108-112). Late Neolithic to early Bronze Age flint was recovered from it. A NE-SW ditch containing some burnt flint was similar in character to dendritic gullies related to the sand and gravel causeway examined in the 1992 excavations. A posthole lay to the east of it. More significantly, a deep WSW-ENE ditch was exposed along the length of Trench N112. This ditch was identical in form and fill to the two parallel (NNW-SSE) ditches excavated on the Yarnton Floodplain excavation site. Like these ditches it had several recuts, appeared to have been deliberately backfilled and contained some Peterborough Ware in the earlier fills. The importance of this area cannot be over-emphasised.

13.1 Flint

By Philippa Bradley

Introduction

The evaluation produced a small assemblage (183 pieces of struck flint and 43 pieces of burnt unworked flint). Diagnostic artefacts are present although these are either *in situ* grave goods (six barbed and tanged arrowheads from the Beaker burial 135/35 and an end scraper from within the small Beaker 135/36) or redeposited (a geometric microlith from medieval ?alluvium). The assemblage has therefore been dated in broad terms using the diagnostic pieces present and various technological traits.

Factual data

The material has been briefly scanned; recording has been kept to a minimum while still allowing the assemblage to be quantified and categorised. Technological information has been recorded at a very general level to aid dating.

Quantification

Table 1 Composition of Assemblage

'Flakes' = flakes, blades, blade-like flakes and core rejuvenation flakes

Flakes	Chips	Irregular waste	Cores	Retouched forms	Burnt unworked flint	Total
135	17	6	7	18	43	226

Table 2 Retouched forms

Microlith	Barbed & tanged arrowheads	End scrapers	End & side scrapers	Backed knife	Retouched flakes	Miscellaneous retouched	Total
1	6	2	2	1	3	3	18

Raw materials

The majority of the flint has good flaking properties and would appear to have been brought to the site. It is very similar to material found during the Yarnton Floodplain (1992) and Yarnton Worton Rectory Farm (1989-91) excavations. A few pieces of flint are poor quality, heavily iron-stained and with worn cortex. They are probably from local superficial deposits, although the flint within these gravels is of doubtful flaking quality.

Technology and dating

The material seems to be the product of a fairly unspecialised technology. Both hard and soft hammers were used. Cores tend to be extensively worked (average core weight 49.8 g); multi-platform cores are the most common type. Two core rejuvenation flakes would suggest that some effort was being made to maintain core platforms, maximising the available raw material.

The diagnostic forms include six barbed and tanged arrowheads from the Beaker burial 135/35 and a geometric microlith (late Mesolithic) from 99/2. The arrowheads are consistent with the date and other associations of the burial. An end scraper was found, in the smaller of the two Beakers, during conservation. The scraper is minimally retouched on the end of a slightly blade-like blank.

Otherwise the majority of the flint is of broadly Neolithic to Bronze Age character. Refinement of the dating is not possible at this stage as material is spread thinly across the area evaluated. The blades, blade-like flakes and soft-hammer struck flakes from, for example, Trench 56 in Area 2, Trenches 132 and 148 in Area 6 or Trenches 239 and 308 in Area 1 may indicate an earlier element to the flintwork. This element is, however, difficult to quantify at this stage.

The quantity of flint recovered from each Area is varied (see summaries below). Although more trenches were excavated in some Areas these differences are not wholly attributable to sampling. A comparison was made between Areas 5-7 of the recent evaluation and two areas evaluated in 1991, the Gravel Island and the area south of the Channel, both subsequently excavated in the 1992 Yarnton Floodplain excavation. The results are set out below:

Table 3

Area Excavated	Number of worked flints (number of flints per trench)	Yarnton Floodplain total excavated flint
YCE Area 5 (93 trenches)	55 (0.59)	-
YCE Area 6 (35 trenches)	31 (0.89)	-
YCE Area 7 (44 trenches)	18 (0.4)	-
YFP Gravel island (31 trenches)	13 (0.42)	1224 (490 flints per hectare)
YFP S side of Channel (12 trenches)	36 (3.0)	1600 (1600 flints per hectare)

The figures for YCE Areas 6 and 7 are interesting. Both of these Areas are on the same gravel island as Sites 1 and 3 excavated in 1992 (Yarnton Floodplain). The density of worked flint recovered from Area 7 is comparable to that for the earlier evaluation. The subsequent excavation of the Gravel island produced 1224 pieces of struck flint or 490 per hectare. The figure for Area 6 is therefore instructive being approximately double the density per trench as the comparable area excavated in 1992. However, it should be stressed that the figures for YCE are

provisional. The density of struck flint in Area 5 (the north side of the Channel) does not compare with that from the south side of the Channel but is slightly greater than the area further east. This may mean that different kinds of activity took place on the north and south sides of the Channel.

Provenance

The flint was recovered from pits, ditches, treethrow holes and layers. It is summarised by trench in Appendix 1.

Condition

The flakes from the test-pits tend to be small and are frequently hard-hammer struck, many are broken. Some of this material may be Bronze Age in date.

The flint is generally in good condition. All of the flint has been individually bagged to avoid abrasion to edges. The potential for long term storage of this material is therefore good.

Potential

This assemblage is similar to material recovered from Yarnton Floodplain and Yarnton Worton Rectory Farm. The Beaker burial with its six barbed and tanged arrowheads and end scraper is of regional and national importance. It will be of interest to compare the material more fully and some of the areas of potential are listed below:

i. Raw material studies

ii. Technology – a good opportunity to look at technological change from the Mesolithic to the late Bronze Age over a large area (if all the other Yarnton Cassington sites are considered)

iii. Spatial distributions – are particular artefact types in particular types of feature or particular areas ?

iv. Chronology – any chronological shift of settlement

v. Non-domestic use – Beaker flat burial and ritual/non-domestic features found at Yarnton Floodplain.

13.2 Earlier Prehistoric Pottery

Alistair Barclay

Introduction

The evaluation produced a small quantity of prehistoric pottery (413 sherds/2629 g) and two complete but fragmentary Beaker vessels. The excavated assemblage includes material of the following periods: Later Neolithic (Peterborough Ware and Grooved Ware), Late Neolithic/Early Bronze Age (including Beaker) — hereafter LNEBA, and Late Bronze Age/Early Iron Age — hereafter LBA/EIA.

Method

All of the material was recorded and quantified by sherd count and weight. Fabrics were examined using a binocular microscope and recorded under principal inclusion type. The condition (wear) of the material was recorded on a scale of 1-4 (fresh-average-worn-very worn).

Factual data

Quantification

Table 4

Area	Later Neolithic		LNEBA (including Beaker)	LBA/EIA	Indeterminate prehistoric	Totals
	Peterborough Ware	Grooved Ware				
1						
2			1, 5 g (BKR)	245, 1644 g	41, 2 g	247, 1651 g
3				12, 31 g	1, 1 g	13, 32 g
4			1, 4 g (BKR)	31, 90 g	11, 15 g	43, 109 g
5			5, 31 g	3, 13 g	1, 2 g	9, 46 g
6	14, 265 g	48, 381 g	2, 3 g	1, 15 g	2, 2 g	67, 666 g
7	21, 77 g		1, 13 g; two Beakers	1, 11 g	3, 5 g	26, 106 g
Test pits			1, 3 g	6, 15 g	1, 1 g	8, 19 g
Total	35, 342 g	48, 381 g	11, 59 g; two Beakers	299, 181 g	20, 28 g	413, 2629 g; two Beakers

Provenance

Prehistoric pottery was recovered from evaluation Areas 2-7 and from three of the test pits. Later Neolithic pottery, Peterborough Ware and Grooved Ware, was concentrated in Areas 6-7 and 6 respectively. Peterborough Ware was recovered from pits and the ditches of a rectangular enclosure. Two Beaker pots, one placed inside the other, were found with a ?male inhumation in a flat grave in Area 7. Small quantities of LNEBA pottery were found in Areas 2, 4-5 and 7. LBA/EIA pottery was found in Areas 2-7 with a significant quantity coming from a single pit in Area 2. Smaller quantities of LBA/EIA sherds came from the filling of two ponds and from two postholes in the same area. The material is listed by trench in Appendix 1.

Area 1

The trenches in this Area produced no earlier prehistoric pottery.

Area 2

Three trenches (45, 46 and 57) produced a significant quantity of LBA/EIA pottery, represented mostly by plain body sherds in fabrics tempered either with grog, quartzite, flint or shell. The combination of fabrics would indicate a LBA/EIA date range for this material, and this is supported by the few featured sherds, notably a finger-tip-decorated rim in a quartzite fabric and large fragments from a bipartite vessel in a shell fabric. Two contexts, a pond (45/12 and 45/17) and a pit (57/5-7 and 10) produced significant quantities of LBA/EIA pottery. Later sherds were present in the upper fill of the pond (49/12; see Booth below).

Area 3

The trenches in Area 3 produced very little earlier prehistoric pottery. Trench 59 contained 12 LBA/EIA sherds and Trench 66 contained an indeterminate earlier prehistoric sherd.

Area 4

Thirteen trenches produced a total of 43 sherds (109 g), predominantly of late Bronze/early Iron Age date, with one sherd of Beaker from 5/4.

Area 5

Seven trenches produced a total of nine sherds (46 g), most of them indeterminate LNEBA and LBA.

Area 6

The 67 sherds/666 g of pottery from Area 6 include nine 9 sherds/120 g from 130/4 which can be assigned to the Durrington Walls substyle of Grooved Ware. Two large decorated body sherds from a single vessel with vertical cordons and incised lines stand out in terms of 'quality' from the Grooved Ware from this pit and indeed from this and the other Yarnton excavations. The Clacton substyle is represented by 39 sherds/262 g from pit 149/10. it. The substyle is regionally uncommon. The adjacent Floodplain excavations (YFP) produced a large quantity of Grooved Ware but of the Durrington Walls substyle.

Peterborough Ware includes 13 sherds/258 g from two Fengate style vessels from 142/3. Indeterminate later Neolithic/early Bronze Age and early Iron Age material were also recovered.

Area 7

Three Trenches (115, 136 and 142) produced a small assemblage of middle-late Neolithic Peterborough Ware, which can be assigned either to the Ebbsfleet, ?Ebbsfleet/Mortlake or Fengate substyles. The pottery indicates later Neolithic activity in this Area and perhaps dates a rectangular enclosure. The recovery of Fengate Ware from two separate trenches is of some importance as very little of this substyle has been found in this region. Peterborough Ware was found in the adjacent Yarnton Floodplain excavation but it did not belong to this substyle. Significantly this style has been found at Cassington 1 km to the southwest.

Two inhumation graves produced prehistoric pottery. Grave 140/4 contained a small, worn, decorated rim sherd (Beaker/Grooved Ware?).

Two complete but fragmentary Beakers came from a grave in Trench 135. The following provisional remarks can be made. The two Beakers fall within Clarke's Wessex/Middle Rhine (W/MR) group, although they are quite different in appearance. The larger vessel belongs to a subgroup of very slender, S-profiled Beakers with the characteristic oxidised 'sealing wax red' finish. The surface of the vessel has been smoothed or burnished and the comb impressions have been infilled with white inlay. The vessel is probably one of the taller examples of its type and can be compared with similar W/MR Beakers from the region (eg: Dorchester on Thames) and from the south of England in general.

The larger vessel contained a second Beaker which can also be classified as W/MR. This vessel has a less sinuous profile with a rim bevel, is decorated with all-over-comb impressions and is of a coarser fabric. The fabric contains a range of inclusions including shell, flint, quartz and **bone**. The use of bone as tempering material is unusual but not unknown. This Beaker contained ?burnt organic material and an unburnt flint scraper. Part of the interior appears burnt although this could be staining from the organic material and it is possible that the vessel has been refired.

The contrast between the two Beakers is striking considering their contextual association. The larger and finer vessel may represent a prestige object produced by a specialist potter or workshop; the second smaller vessel could be a more 'local' or 'domestic' product.

Test pits

Three test pits (59, 61 and 66) produced a total of eight sherds (19 g): one perhaps of later Neolithic/early Bronze Age date from 59, six late Bronze Age sherds from 61 and a crumb, possibly of pottery, from 66.

Potential

1. The burial in Trench 135

This burial is of importance for

i) Understanding Beaker funerary practice: the evidence from this grave may allow for the questioning of previous assumptions equating Beaker form with social status and hints at more complex funerary patterns.

ii) Elucidating Beaker chronology: the close association of the two different vessels in an inhumation grave together with other artefacts makes this an important find for defining the currencies of different forms of Beaker and the objects deposited with them.

iii) Artefact studies *per se*: the two vessels are capable of yielding valuable technological information, concerning, for example, the production of the red colour, highly burnished finish and white infill of the larger and the use of bone temper in the smaller.

2. The collection as a whole

The prehistoric pottery from the evaluation serves to

i) define the timespan and cultural affinities of the Neolithic and Bronze Age presence in the area

ii) expand the picture already obtained from the Yarnton Floodplain excavations, especially in respect of the range of Peterborough Ware and Grooved Ware substyles from Areas 6 and 7 and of the presence of a Late Bronze Age/Early Iron Age domestic assemblage down on the Floodplain in Area 2.

iii) emphasise the distinct local modes of deposition of Peterborough Ware (in the ditches of ?monuments), Grooved Ware (in pits) and Beaker (in burial(s)).

13.3 Iron Age and Later Pottery

Paul Booth

A total of 624 sherds (7.230 kg) of pottery of all periods from early/middle Iron Age to post-medieval was briefly examined. The majority of the material (81.3 % of sherds, 85.5% of weight) was of late Iron Age-Roman date. This material, and early Anglo-Saxon sherds, concentrated in Area 1, though Roman sherds were encountered in all Areas. Iron Age, medieval and post-medieval sherds were widely but thinly distributed. The only significant concentration of pottery was in Area 1.

A breakdown of the main components of the assemblage by period and Area is shown in Table 5.

Table 5

Quantification by sherd count of pottery by Area and period																			
	EIA?	MIA	IA	IA Total	R-B										R-B Total	Saxon	Medieval	Post-medieval	Totals
Ware class					E	O	R	B	C	S	F	M	W	Q					
Area																			
1		2		2	40	28	271	27	19	5	5	2	4	1	402	33	2	2	441
2		12	1	13	5	4	6		1						16		5	13	47
3	1	2	1	4	4	7	12	1					1		25		11	2	42
4		4	2	6	24	2	3	1							30	1	2		39
5		8	1	9	7	3	9								19		1	2	31
6			6	6		2	2								4				10
7			2	2	9	1	1								11			1	14
Total sherds	1	28	13	42	89	47	304	29	20	5	5	2	5	1	507	34	21	20	624
Total wt (g)	3	165	58	226	824	505	4280	224	165	20	23	93	45	2	6180	458	125	241	7230

Iron Age

The Iron Age sherds are mainly in sand-tempered fabrics, but shell-tempered sherds also occur, and it is mainly these which were assigned to the 'unspecified' Iron Age category on the basis that they could have been of early or middle Iron Age date. The average size of the Iron Age sherds was small and featured sherds were scarce. Their distribution was generalised and only a single context (56/14) in Area 2 produced a reasonably coherent 'group' including two rims. None of the material indicates intensive settlement.

Roman

The term 'Roman' here also embraces the late Iron Age, whose characteristic grog-tempered pottery spans much of the 1st century AD. Such material (and related fabrics, together constituting the E ('Belgic type') wares) occurred throughout the evaluated Areas, and formed 17.6% of the total Roman sherds. The dominant element of the Roman assemblage, however, was reduced coarse (R) wares, most if not all probably of quite local origin. These were particularly important in Area 1 (where they amounted to 67.4% of the Roman sherds). Elsewhere they were of lesser importance, but the numbers of sherds involved (apart from in Area 1) are quite low, so the significance of this is unclear. Only in Area 4 (specifically in Trench 266) was the preponderance of Belgic type fabrics such that an almost exclusively 1st century date range can be proposed for 'Roman' activity in this vicinity. Here, however, the 'activity' must have been at quite a low level. Only the pottery from Area 1, and in particular that from Trenches 239 and 270, suggests a reasonable density of domestic activity with associated rubbish disposal.

The reduced coarse ware fabrics are not closely datable, but the most common individual fabric appears to have had a floruit of late 1st-2nd century. Generally there seems to be a lack of late Roman material. There were only five sherds of Oxfordshire colour-coated ware, and other standard late Oxfordshire products were also very scarce. The overall proportion of fine and specialist wares (here ware groups S, F, M, W and Q) is also very low, which would support a suggestion that the chronological emphasis of the assemblage is on the 1st-2nd centuries, since such wares are generally better represented in the later Roman period. It is clear, however, that in any period this is a fairly typical low status rural assemblage. This is borne out by the low representation of samian ware, the shortage of mortaria and the total absence of amphorae.

Saxon

All but one of the 34 Saxon sherds occurred in Area 1. In that Area they certainly reflect contemporary settlement (the weight of these sherds was above the site average). It is of interest that the majority are in grass-tempered fabrics (27, as opposed to 6 sand-tempered sherds in Area 1 contexts). This might suggest that there was relatively little activity of the earliest Saxon period in the evaluation

area, in which sand-tempered fabrics would be expected to dominate the assemblage. At Yarnton Worton Rectory Farm to the E there was a close spatial connection between the latest R-B occupation and the earliest Saxon features. If a similar settlement sequence was followed here it may be that the focus of the latest Roman and earliest Saxon activity lies outside the evaluated Area(s).

Medieval

Medieval material is generally sparse. It was thinly dispersed across the site, being completely absent from Areas 6 and 7. Its most consistent appearance was in Area 3, where 11 of the 42 sherds were of medieval date, most falling in an 11th-13th century date bracket. This date range seems to have been characteristic of much of the medieval material. Only one sherd was provisionally assigned to the 10th-11th centuries, and 14th-15th century material was also scarce. It is notable that the average sherd size was small (6 g), which might suggest that most sherds arrived in the area as a result of manuring. If so, the date range of the majority of the material might be significant and reflect a reduction in arable in the later medieval period, perhaps after the mid 14th century.

Post-medieval

There were only 20 post-medieval sherds, 13 of which came from Area 2. Most of the material was of 19th-20th century date and requires no comment.

13.4 Fired Clay

Alistair Barclay

Introduction

The evaluation produced approximately 500 fragments (4788 g) of fired clay, from Areas 1-3 and 5-7 and from three of the test pits. It consists of mostly amorphous fragments which have been oxidised reddish brown. In addition, Area 1 produced fragments of Roman tile and possible kiln fabric, and Areas 2-3 produced fragments of ?post-medieval tile. No object fragments or wattle impressions were observed during the assessment.

Methodology

The fired clay was assessed by rapid scanning and quantified by number of fragments and weight. A record was made of all the diagnostic attributes. Fabrics were not recorded.

Quantification

Table 6. Fired clay

Area	Fired Clay	Tile/brick	?Kiln debris
1	6, 31 g	5, 155 g	2, 37 g
2	7, 11 g	1, 100 g	
3	5+, 14 g	1, 1 g	
4			
5	156+, 3707 g		
6	280, 576 g		
7	14, 86 g		
Test pits	23, 72 g		
Total	491, 4495 g	7, 256 g	2, 37 g

Individual finds are listed in Appendix 1

Provenance

Two Areas, 5 and 6, produced significant quantities of fired clay. The fill of a treethrow hole (97/15) produced the largest quantity, although this consisted

entirely of amorphous lumps.

Area 1

Area 1 contained 13 fragments (221 g) of fired clay and includes two pieces of possible kiln debris (239/4) and five fragments of Roman tile.

Area 2

Area 2 produced eight fragments (111 g) of amorphous fired clay.

Area 3

Area 3 produced six fragments (15 g) and crumbs of fired clay.

Area 5

Area 5 produced the largest quantity (3207 g) of fired clay, most of which came from a single context (97/15), a treethrow pit. All of the fired clay consists of oxidised, amorphous fragments.

Area 6

Area 6 produced a significant quantity (576 g) of fired clay of which 560 g came from a single Grooved Ware pit (130/4).

Area 7

Area 7 produced 14 pieces and crumbs (86 g) of fired clay, all from 119/4.

Test pits

60/3/1 Post-medieval? (2 pieces, 1 g).

66/1/2 (1 piece, 1 g)

74/1/1 (20 pieces, 70 g) Amorphous lumps.

13.5 Fuel Ash Slag

Comments by Chris Salter

249/4 Fuel ash slag.

This material is often associated with metal working and usually copper but not exclusively. The majority of parallels are from Iron Age sites, for example Beckford.

The slag occurs when calcic hearth lining or sometimes even bone blows-up at high temperature.

13.6 Waterlogged materials (wood and leather): condition, storage and conservation requirements

by Vanessa Fell

Wood

Seven fragments of worked timber including four stakes (two with bark attached) and possible pollarded trunks.

Leather

Part of a leather sole.

Condition

All items are waterlogged. The timbers have been partially cleaned revealing soft degraded surfaces, with some longitudinal splitting of the stakes. The leather sole is fragmentary and extremely friable, and is supported by a clay matrix. No item is likely to withstand very much handling without loss of surface detail (wood) or integrity (leather).

Present storage conditions

All are packed and stored wet, away from light, and refrigerated at c 5°C except for one rather large timber which is currently at 10-15°C.

Storage requirements

Short-term requirements are the maintenance of present conditions until adequately recorded. Biological activity should be minimal though ought to be checked for occasionally, as also should be the water-tightness of the packaging. These conditions to be maintained for any items required for longer-term storage, sampling, or stabilisation.

Potential for conservation

Although the condition of the timbers is poor they are likely to suffer damage

through handling and treatment, stabilisation would be feasible. The leather sole is unlikely to survive long-term storage, full cleaning, or stabilisation.

Recommendations

It is not beneficial to employ long-term storage measures for waterlogged organic materials due to continued deterioration and because of potential health hazards. The Yarnton artefacts are in a particularly fragile and vulnerable condition and may therefore suffer considerable further deterioration in the medium-term. It is therefore recommended that the following are undertaken as soon as possible:

- (1) The timbers are examined and recorded by the wood specialist and advice sought on the desirability for disposal, short- or medium-term storage (for additional analyses), or stabilisation (if technologically unusual).
- (2) The leather is fully recorded, but does not seem to merit stabilisation given its fragmentary and friable condition.

13.7 Animal Bone

by Pippa Smith

The bone from machine evaluated trenches was examined at the Oxford Archaeological Unit on January 25th and potential for further work evaluated. Seven Areas were isolated of which Areas 1 and 2 were located on the second gravel terrace and Areas 3-7 on the floodplain. The Areas are discussed individually below.

Area 1

This is a cropmark site with evidence of Iron Age, Roman and Saxon settlements. The bone is in excellent condition, with well-preserved surfaces. Cut marks are clearly visible. Many bones are complete and a number of measurements will be possible. The overall preservation is very similar to that noted on the bones from Yarnton Worton Rectory Farm.

Horse and dog were noted alongside the more usual domestic species of cattle, sheep or goat and pig. One partial skeleton was observed which is probably goat. This Area contained a high proportion (approximately 70%-80%) of identifiable specimens.

Area 2

This is an Area on the second terrace of mainly Iron Age activity with some evidence of late Bronze Age activity.

The bone from this Area was in mixed condition, ranging from highly weathered and eroded to excellent. There is evidence of mixing as a rabbit femur was found. Given the mixed condition and evidence of intrusion caution must be recommended in this Area. Approximately 50% of the fragments were identifiable.

Area 3

This Area is off the second gravel terrace and there is a lot of run-off. The finds were mostly Roman and medieval, from what may have been field boundary ditches.

Only a small amount of bone was recovered, of which 80% was burnt. The surface condition of the unburnt bone was reasonable with only slight evidence of weathering. Virtually 100% of the bone from this Area was unidentifiable.

Area 4

Area four was located on the floodplain. There is evidence of a small late Bronze Age or early Iron Age settlement, the upper layers of which have been disturbed by Roman ploughing. A boundary ditch was dated to this period. Neolithic material was also present.

Two types of preservation were noted from this Area. The first is weathered, 'chalky' bone with slight surface erosion and cracking. The other is excellent surface condition and is much harder. The proportion of identifiable fragments is similar in both groups (approximately 60%).

Area 5

Area 5 is located north of the main palaeochannel. Scatters of poorly dated prehistoric material were noted. 'Burnt mound' deposits were present.

As for Area 4, two types of preservation were noted, one 'chalky' and one with more intact surfaces. Two fragments which were stained very dark brown were also seen and these look as though they may have come from waterlogged deposits. Red deer antler was noted as were horse bones and teeth alongside cattle, sheep or goat, and pig. Some age data would be available from surviving teeth. Approximately 60% of the bone from this Area was identifiable.

Area 6

This Area is located on the southern side of the palaeochannel on a gravel island. There is evidence of prehistoric activity from pits, some containing Peterborough Ware and Grooved Ware, and a well containing late Bronze/early Iron Age material.

Again the two preservation types were noted. Bone from a pit containing Grooved Ware was in reasonable condition. Some very young cattle bones were present

suggesting that survival was good.

Context 130/4 was a pit containing Grooved Ware and burnt bone. Some unburnt cattle bones were very rounded and weathered, this may have been the result of fluvial transport. Much of the burnt bone (90%) was unidentifiable.

Of the bone from the whole of this Area about 50% was identifiable.

Area 7

Area 7 is also on the southern bank of the palaeochannel on the gravel island. The Area contains a Beaker burial and a rectangular enclosure containing Peterborough Ware.

A few bones are stained dark brown with a very well preserved surface and may have come from waterlogged deposits. The rest of the bone is in reasonable condition, much of it has the slightly chalky texture described elsewhere. Some cut marks are visible although some evidence has probably been destroyed.

Young cattle bones, complete with epiphyses, were noted which suggests reasonable survival. Teeth have survived well and tooth wear data should be available. Approximately 30% of the bone is identifiable which is average for Neolithic contexts.

Recommendations

The prehistoric activity in Areas 6 and 7 could profitably yield additional faunal data which would have interesting potential. Prehistoric bone has survived sparsely from other parts of the Yarnton Cassington study area and the evidence from these two may help to complete the picture of the exploitation of animals at Yarnton through time. Preservation was reasonable and the survival of teeth, young specimens and cut mark evidence would suggest that the potential for further information is great.

The high proportion of identifiable specimens from Area 1, coupled with the excellent condition suggests that this Area may profitably yield further data. Similarly Areas 4 and 5 may provide useful additional data, particularly if the dating of the Neolithic contexts could be clarified.

Area 2 is of lower priority as the bone was in very poor condition and there was evidence of intrusion. Similarly, Area 3 yielded poor quality bone data.

The Areas with the greatest potential for animal bone studies for the region are those in which early and late Neolithic features were found. The late Bronze Age and Iron Age would also merit targeted excavation and careful retrieval of bone.

Consideration should be given to wet sieving all features dated to the Neolithic with 4 or 5 mm mesh sieves if a water supply is readily available. This would

provide a check on the level of recovery of bone from the already excavated floodplain sites.

It is unlikely that further excavation of Roman and medieval features would contribute the understanding of animal husbandry on the Upper Thames in the later periods.

13.8 Human Bone

Three human skeletons were found in the evaluation. Two were of crouched adults and were found on the floodplain within discrete grave cuts; the third was a neonate buried in the top of a Roman enclosure ditch. The cremated bone deposits were investigated for the presence of human bone but none was detected.

13.9 Assessment of Macroscopic Plant and Invertebrate Remains from the Yarnton Cassington Evaluation

Mark Robinson

During the excavation, the programme of environmental archaeology established for the Yarnton Floodplain project (Robinson 1993) was continued, with three lines of investigation:

1. On-site recording of sediment types, stratigraphic relationships, degree of waterlogging, field observations of biota.
2. Sampling of deposits for laboratory analysis for molluscs and waterlogged macroscopic plant and invertebrate remains.
3. Sampling and flotation and sieving by the excavators for charred plant remains.

Field Observations

The field observations on the floodplain were entirely consistent with those made during the Yarnton Floodplain project concerning alluvial stratigraphy and hydrological change, so they will not be repeated here. However, two significant discoveries were made.

Much silting had occurred in the late Bronze Age ditch that crossed the floodplain in Area 4 before it experienced alluviation. In contrast, the 'curious' small pits of

the alignment in Area 5, north of the palaeochannel, are almost entirely filled with shelly alluvium. This suggests that the alignments post-date the ditch and helps confirm the late Bronze Age to early Iron Age date provisionally attributed to these features in Robinson (1993).

The second important observation was that channel sections adjacent to the gravel island in Area 6 showed evidence for two episodes of ploughing sealed by alluvium. It had already been established that early Roman cultivation of the gravel island had occurred. A spread of ploughsoil from the prealluvial ground surface of the gravel island extended as a line of gravel far into the early alluvial fill of the channel. This deposit, which probably represents the Roman ploughsoil, was sealed with alluvial clay. Further cultivation had then taken place on the gravel island, which resulted in a second spill of ploughsoil and gravel into the channel, which had been sealed in turn by further alluvial clay. It is likely that the upper layer of ploughsoil resulted from the late Saxon or early medieval cultivation on the gravel island before the medieval alluviation had reached its greatest extent. A scatter of medieval pot sherds found in the modern ploughsoil of the gravel island during fieldwalking perhaps resulted from manuring of the medieval field.

The organic deposits observed in the channel sections appeared similar to those sampled earlier and further samples were not taken.

Mollusc and Waterlogged Plant and Invertebrate Samples

Details of the samples for molluscs and waterlogged macroscopic remains are given in Table 7.

Molluscs appear to be absent from the treethrow pits and the prealluvial old ground surface samples. Shells of riverine aquatic molluscs are present in samples from the bottom of the general alluvial covering to the floodplain, but those deposits are not closely dated.

The waterlogged samples from the late Bronze Age ditch which crosses the floodplain (Area 4) contain seeds of damp grassland species, such as *Potentilla anserina* (silverweed), *Prunella vulgaris* (selfheal) and *Leontodon* sp. (hawkbit). Various grassland beetles, including *Agriotes* sp., are also present. The seeds suggest that the vegetation of the ditch comprised *Alisma* sp. (water plantain) and *Glyceria* sp. (reed grass). Where the ditch was close to the palaeochannel, the flowing water snail *Physa fontinalis* was found, but the ditch does not contain the full range of aquatic mollusc shells that commonly occur in the alluvium, and it is more likely that the presence of this snail was due to the ditch being linked to the channel. A mollusc sample from a non-waterlogged section of the ditch further away from the channel contains only terrestrial species.

Table 7. Source of molluscan and waterlogged samples

	Number of Samples	
	Mollusc	Waterlogged
Treethrow pits	3	-
Old ground surface / base of alluvium	4	-
Late Bronze Age ditch	1	4
Bronze Age / Iron Age ditch	-	1
Bronze Age / Iron Age well	1	1
TOTAL	9	6

The waterlogged macroscopic plant remains from the bottom of the late Bronze Age well on the gravel island (Area 6) are mostly from thorn scrub, including *Rhamnus catharticus* (buckthorn), *Rosa* sp. (rose), *Crataegus* sp. (hawthorn) and *Prunus spinosa* (sloe). In contrast, there is a strong grassland element amongst the Coleoptera, with the chafer *Phyllopertha horticola* and scarab dung beetles well represented. The dung beetles include *Onthophagus nutans*, which is now extinct in Britain. Molluscs from the non-waterlogged upper fill of the well are mostly woodland species such as *Ena obscura* and *Discus rotundatus*.

A ditch (40/7) on the floodplain in Area 5 contains badly preserved organic material in its lowest fill typical of the organic alluvium found earlier on the lowest-lying parts of the floodplain, with seeds of various aquatic plants including *Ranunculus* S. *Batrachium* sp. (water crowfoot), *Potamogeton* sp. (pondweed) and *Zannichellia palustris* as well as seeds from plants of wet grassland. The usual shells of flowing water molluscs, such as *Bithynia tentaculata*, are also present

Charred Plant Remains

A total of 62 flots was assessed for charred plant remains but charred seeds or other identifiable plant remains (excluding charcoal) were only found in 8 samples, which are listed by period in Table 8. Charcoal was recorded in 29 samples, being almost entirely *Quercus* (oak), *Alnus/Corylus* (alder/hazel) and Rosaceae (hawthorn, sloe etc.).

Charred hazel nut shell fragments and a sloe stone were noted from the cluster of late Neolithic pits on the gravel island (Area 6). Otherwise remains are very sparse, with only a single cereal grain (or more likely cereal weed), *Avena* sp. (oats) from the entire site.

Table 8. **Presence of charred plant remains**

	Neo	LBA	BA/IA	Unphased
No of samples with identifiable remains	2	1	1	3
<i>Corylus avellana</i> – hazel nut shell frags	+	-	-	-
<i>Prunus spinosa</i> – sloe	+	-	+	-
<i>Avena</i> sp – oats	-	+	-	-

Conclusions

The field observations provide a useful addition to those made during the Yarnton Floodplain project, in particular the discovery of the early medieval episode of ploughing on the gravel island.

The evaluation of the mollusc and waterlogged samples shows the existence of different environments on the floodplain at different times during the Bronze Age and perhaps the Iron Age: grassland that was not experiencing flooding, scrub, and grassland that was experiencing flooding. If the deposits from which the samples came can be placed in a dated sequence, they will form a useful part of the evidence for changing conditions on the floodplain during the prehistoric period. They apparently fill gaps in the sequence obtained from the earlier excavation.

Although few charred plant remains were recovered from the flotation examples, they are no more sparse than they were from the Yarnton Floodplain project samples and merely serve to demonstrate the scale of sampling required on early prehistoric sites.

13.10 Pollen

Samples for pollen were taken by James Greig in October 1993 from a section across the palaeochannel in Trench 215 as part of an ongoing project to chart the vegetational history of the Yarnton and Cassington area. These supplement samples already collected on the Yarnton Floodplain excavations and on Oxey Mead. The 1993 samples are awaiting preparation, but results from earlier work are encouraging, demonstrating that adequate pollen is preserved to document events and changes in the landscape.

14. CONDITION OF THE ARCHAEOLOGICAL RESOURCE AND COMMENTS ON THE RESULTS

14.1 Condition of the Archaeological Resource

14.1.1 Condition of Archaeological Features

In general archaeological deposits and features are well preserved on this site. This is evidenced by the variety of feature type, including insubstantial features, which have survived in all areas. As on the vast majority of rural sites, however, ploughing has taken its toll and stratified deposits, such as floor surfaces, seldom or never survive. What is lost in vertical control, however, is gained by the scale of the project and the ability to observe spatial patterning both within and between sites. The presence of this horizontal dimension is one of the greatest assets of the Yarnton Cassington study area. In a few places the preservation of ground surfaces buried beneath alluvium has led to the survival of shallow features, not cutting beneath the old topsoil, and an *in situ* finds distribution. In other places, alluvium has protected the banks of ditches, for example in the south of Field 9, allowing the investigation of complex relationships between ploughing, ditch digging and the onset of flooding and alluviation in the Roman period.

14.1.2 The Effects of Modern Ploughing

Modern ploughing is cutting into the tops of archaeological features on the top of the gravel terrace in some places. The presence of fragile Saxon sherds in the ploughsoil over Area 1, where they could not survive for long, had already alerted us to the probability of some destruction here. The Saxon site on the edge of the second gravel terrace appears to be most seriously affected by this threat. Nevertheless, postholes have survived and the sunken-featured buildings are still relatively deep. Roman features in this area lie slightly off the top of the terrace and are now protected by a shallow deposit of colluvium (although medieval cultivation has taken its toll). Any deep ploughing would remove this protection, however. Further to the east in Area 2 ploughing is affecting an area of Iron Age domestic activity on the top of the slope. Here, postholes are now quite shallow. On the floodplain modern ploughing is also affecting a small area of high gravel island in the east of Field 11. No archaeological features were found here; possibly they have already been destroyed.

14.1.3 The Effects of Roman Ploughing

In Areas 4, 6 and 7 and some parts of Area 5, Roman ploughsoil overlies earlier archaeological sites. Roman cultivation has undoubtedly truncated prehistoric features, for example in Area 6, but everywhere small features survive. Without Roman arable cultivation it seems unlikely that early sites would ever have been recognised, as it is from Roman ploughsoils that modern ploughing brings early finds to the surface. Roman ploughsoil also protects features from the more damaging effects of modern cultivation.

14.1.4 The Effects of Alluviation

The accumulation of alluvium on the floodplain has resulted in the preservation of buried ground surfaces, features cut into them and finds within them. This survival is significant for the understanding of *in situ* finds deposition and the different uses of more low-lying sites. Alluvium, although excellent for the protection of early settlements, has masked their presence, resulting in the sealing not only of early sites but also the Roman ploughsoil in some places. Thus the full extent of Roman arable fields was not visible in fieldwalking. This underlines the importance of understanding topography and layer deposition when interpreting field evaluation results.

14.1.5 The Effects of Colluviation

In Area 3 colluvium from the terrace has sealed earlier layers and protected these areas from modern ploughing. It has, similarly, sealed earlier ploughsoils.

14.1.6 The Condition of Artefacts and Ecofacts

Artefact preservation was good in the evaluation, except where finds had been abraded in ploughsoils. Pottery, bone and carbonized plant remains survive in all areas. Particularly encouraging is the survival of bone on the floodplain in an area where bone preservation has been very poor in past fieldwork. The importance of complementing the emerging environmental evidence from botanical remains with the faunal evidence cannot be over-emphasised. Waterlogged deposits were present on the floodplain, not only within the palaeochannels, but also in features of late Bronze Age, Iron Age and Roman date. The preservation of pollen in the channels will be of particular significance, enabling a record of the landscape from at least the Bronze Age to the medieval period to be obtained.

14.2 Constraints of the Evaluation

A few problems encountered during the evaluation led to a less than perfect record of the archaeological remains in a few areas.

The evaluation took place on arable land between the harvest and ploughing/re-seeding of the fields. Poor weather conditions in the early summer meant a late harvest and the window between harvest and re-ploughing was very short in some areas. This particularly affected evaluation in Field 8, a large field where archaeological sites were known to exist. Nevertheless, it proved possible to examine a 2% sample of those areas where sites had previously been located (Area 1 and Area 4) and areas where fieldwalking suggested early sites may survive (southeast of the field, Area 5). Elsewhere at least 1% of the area was trenched and, in addition, a few extra trenches were dug but not recorded in order to confirm

the absence of archaeological features in the centre of the Field (Area 3). Field 9 also had to be finished hurriedly, although this only affected the test-pit sieving.

Weather conditions were poor during much of the evaluation leading to flooding in some areas. This caused particular problems in Field 12 where trenches had to be pumped before they could be examined (a time-consuming exercise for the approximately 30 trenches affected). In some trenches on the line of the main channel the pressure of water led to serious instability and collapse of the trench sides enabling only a cursory examination of some of the sections.

Lesser problems were caused by the presence of overhead cables, the inability to dig round the edges of some fields, especially Field 8, because of horse rides and a small paddock and the spreading of extremely unpleasant manure on fields whilst they were being investigated.

14.3 Problems of Interpretation

The deposition of soils on the floodplain is complex and cannot always be readily understood from narrow trenches. Experience over the last few years on this area, however, has enabled sequences to be interpreted with few serious difficulties in this evaluation.

The understanding of the soils in Field 9 and, in particular, the differentiation of colluvium from early, buried ploughsoils was more problematic. The very variable nature of the natural in this area, where? late Devensian water channels seem to have cut through the second gravel terrace and filled with clean clay silts, did not assist interpretation of deeper deposits in the field. Test-pit sieving aided the understanding of these layers, however, and we can be fairly confident about their interpretation.

Several sherds of pottery with a grog-tempered fabric (E80) were found on the floodplain in postholes, gullies and shallow ditches with burnt stone and flint, material normally associated with prehistoric occupation. Some sherds are thought to be 1st century AD in date and a few certainly come from wheel-made pots. It is uncertain, therefore, whether this fabric type is long-lived and also prehistoric in date, whether there is small-scale 1st century activity on the floodplain with a material we have previously associated with earlier occupation or whether the sherds have been introduced by intensive ploughing in this area.

Several trench extensions were excavated in order to look for pit clusters and further burials and to follow some ditches. Pit clusters were elusive, however, as it was difficult to predict the direction in which they might extend.

14.4 Comparisons with Yarnton Floodplain Evaluations

It is very difficult to directly compare the results of the Yarnton Floodplain evaluation with the current results. Yarnton Cassington evaluation covers a much larger area on several topographies where on-site and off-site areas can be identified (or at least are thought to exist). Yarnton Floodplain evaluation was undertaken over a single archaeological site showing a greater or lesser intensity of activity.

Caution should also be employed when directly comparing the results of the two exercises as it became evident during the Yarnton Floodplain excavations that features had been identified as ditches in the evaluations which were treethrow pits and some 'postholes' were probably root disturbance. Placing the 2% trench array used in the evaluations over the excavation plan revealed eleven pits or postholes over Site 1, nearly 4% of the total. On Site 3 the number of pits and postholes found in the evaluation was around 10% of the total exposed when the site was stripped. If the array is moved both better and worse results can be achieved; some trench arrays can be positioned to find nothing.

The Yarnton Floodplain Evaluation did accurately predict the nature of the domestic site, it also located the ring ditch, the posthole alignments and the causeway. It missed the linear Neolithic ditches, the penannular gully and, perhaps more significantly, any of the Beaker or Grooved Ware pit clusters.

Thus it can be said that early archaeological sites of any size will probably be located by a 2% sample and, in general, where features are located we have had success in predicting the nature of the archaeological remains represented. Absence of features in this percentage evaluated cannot be used to establish a lack of archaeological features. Pit clusters, burial sites and areas of 'off-site' activity are especially difficult to locate. Results on the floodplain at Yarnton Cassington suggest apparent blank areas. Some investigation should be undertaken to test the validity of this assumption.

14.5 Comparisons with Fieldwalking Evidence

There is no doubt that the fieldwalking evidence has been of tremendous value to the project. It first alerted us to the presence of earlier prehistoric activity on the floodplain, accurately located some of these sites and recovered manuring scatters believed to belong to Roman and medieval fields. This information was only partial, however. It was not appreciated that the prehistoric material on the floodplain was, in fact, coming from Roman ploughsoil and not from the destruction of sites by modern ploughing. Only in the north of Field 11 does it seem possible that finds represent a disassembled site. This is excellent news for the preservation of early archaeological features but does mean that lower-lying areas, already sealed by alluvium before ploughing (or avoided for this reason), are

not represented in the scatters. Subsequent alluviation and colluviation has also masked and preserved the Roman ploughsoil preventing the release of early finds into the modern ploughsoil. Once again the importance of examining soil sequences before interpreting such scatters must be stressed.

14.6 How the Evaluation met the Project Objectives

14.6.1 Questions posed in the Research Design

The evaluation demonstrated the presence of the very rich and varied archaeological resource of the area and the tremendous potential of the data for investigating the range of academic issues which were identified in the research design. Specific questions were posed in the research design through which the proposed model of the history and development of the area could be tested. These are set out above (Section 4.7.2). The evaluation was remarkably successful in answering these questions or at least indicating that they could be resolved by further investigation.

1. Early domestic activity was spread over the floodplain area but not everywhere with the intensity of the gravel island in Field 14. Gravel islands appear to be the favoured location for domestic activity with lower-lying areas possibly used for other functions (wood-working, for example, or burnt mound deposition). The small, discrete areas of activity around the channel seem to represent new elements in the settlement record. There do appear to be concentrations of activity on the gravel island (though 'blanks' ought to be tested, see above 14.4) and smaller sites seem to be discrete. No occupation post-dating the late Bronze Age has been found on the floodplain at Yarnton but at Cassington middle Iron Age sites exist and some occupation may continue into the 1st century AD.
2. The large gravel island in Yarnton (Yarnton Floodplain excavations and Yarnton Cassington evaluation Areas 6 & 7) and that at Cassington (Areas 4 & 5) appear to be the sites of fairly extensive and long-lived settlements. Occupation on the smaller and lower gravel islands seems to be more small-scale and of shorter duration and some of this activity may not be domestic at all. The gravel island at Yarnton, on present evidence, is more extensive than that at Cassington and contains more ceremonial elements; it is also not as long-lived. However, there is considerably more information about this site; the Cassington site is less well-understood and may once have stretched further west.
3. Further burial and ceremonial areas were located both on the floodplain (Areas 6 & 7) and on the gravel terrace at Yarnton Mead Farm.

4. It was possible to establish that Iron Age activity had been fairly extensive at Worton in the area of the Tuckwell's gravel extraction pit. A spread of small-scale Iron Age activity was located across the gravel terrace (in Area 2 and was possibly seen in the fieldwalking results to the north of Worton). The nature of this activity is not well-understood. Roman and Saxon settlement appears to be much more concentrated and the limits of sites of these periods can be fairly accurately predicted.
5. Differences are apparent in all periods between the gravel terrace and the floodplain. For example, it would appear that in the Bronze Age the floodplain was the chosen location for domestic sites with the more marginal gravel terraces used for burial monuments. By the Roman period villages were situated on second gravel terrace and the floodplain was used extensively for arable cultivation. Thus there is a change in the use of these topographies through time. This is discussed in greater detail below.
6. Earlier ditches had been cut on the same alignment as the current parish boundary. It was not possible to date these features in the evaluation. There is scope for further investigation of this issue.
7. The evidence for environmental and land-use changes on the floodplain is excellent. Much of the environmental data from samples (pollen, macrobotanical remains and soil studies) is still being analysed, however, and so the completeness of the evidence is uncertain. There is potential for further work, as little sampling has been undertaken on the lower-lying floodplain sites in Area 5, for example, or on the eastern side of the floodplain study area.

14.6.2 The Specific Objectives of the Study Area

A series of areas of investigation were identified in the research design where research questions and areas and methods for further study could be evaluated (see above Section 4.7.2). The following table assesses the success with which the evaluation located appropriate evidence and established the potential for further investigation. See Figure 1 for the elements of the study area.

Elements of the Study Area	1	2	3	4	5	6	7	8
A. Settlement on second gravel terrace	☆☆☆	☆☆☆	☆ ✱	✱		☆☆ ✱	✱	
B. Floodplain settlement	☆☆☆				☆☆☆			☆☆☆
C. Floodplain land use	☆☆☆				☆☆			☆☆
D. Land use on gravel terrace	☆☆	☆☆	✱			☆		
E. Processes of alluviation	☆☆				☆			☆

- ☆☆☆ The presence of these elements and their potential demonstrated
- ☆☆ Good potential for the survival of this evidence
- ☆ Some potential for the survival of this evidence
- ✱ Potential for further documentary research

15 SYNTHESIS AND THE SIGNIFICANCE OF THE RESULTS

Evaluation of the study area has demonstrated the preservation of a rich and diverse archaeological landscape which has considerable significance for the understanding of settlement patterns and land use from the Neolithic to the present day. It has demonstrated the potential of the site to answer the research questions posed in the project design and has opened some new avenues of investigation.

15.1 Palaeolithic

It is impossible from any ground surface to identify Palaeolithic activity, as it is so deeply buried. Very rarely a stray implement on the ground *may* indicate the presence of others below but only deep excavation will prove or disprove this. Monitoring of gravel extraction by R.J. MacRae and Southampton University will, however, continue to provide information on palaeolithic activity and environment and check for unusual deposits. Should sites be discovered their examination would have to be considered as an emergency measure.

15.2 Mesolithic

Mesolithic features have not been located at Yarnton Cassington but Mesolithic finds are consistently recovered in small quantities across the study area. Rarely they are in treethrow pits, but more usually they are recovered from ploughsoils or later features. As a group these finds will shed light on the nature of the Mesolithic presence in the area and will permit some assessment of whether the sparse evidence reflects only light, intermittent presence or whether the sites from which the material derives remain buried beneath floodplain deposits. It will redress the imbalance of our knowledge of Mesolithic activity in the Upper Thames Valley which is largely derived from sites at higher elevations away from the river valley, possibly because lower-lying sites are sealed beneath alluvium.

15.3 Earlier Neolithic

Earlier Neolithic material has been excavated on the Yarnton Floodplain Excavation (YFP) site, in both pits (containing Abingdon Ware) and on the low-lying old ground surface (Neolithic Bowl and leaf-shaped arrowheads, for example).

No earlier Neolithic features were recognised in the evaluation, although some flintwork was recovered with earlier technological traits, soft-hammer struck flakes for example. A few pits containing such material were found in Area 6. It should be borne in mind, however, that no earlier Neolithic material was found in the Yarnton Floodplain evaluations on the gravel

island and only two possible sherds came from the buried ground surface. Its absence, suggested by the evaluations, may be more apparent than real.

A small amount of the lithics from the Yarnton Gravel Terrace site (YWRF) could be early in date, the greenstone axe fragment for example, but in general this material would fit more happily in a mid/late Neolithic context (with the Peterborough Ware recovered from a feature here). A few pieces of flint with an early appearance were recovered from later features in Area 1, in the same area as a gully packed with burnt stone which yielded a reduced flint core, probably earlier Neolithic in date (in the A40 Witney to Cassington Evaluation). In Area 2 a ditch contained 11 flakes, a core rejuvenation flake and six chips which suggested an earlier Neolithic date. The feature was not, however, certainly Neolithic in date.

Thus, although no conclusively early Neolithic material was recovered from the evaluation, it seems likely that activity of this period is represented in the area, on both floodplain and second gravel terrace. The area with the greatest potential for its recovery on the floodplain seems to be around the concentration of features in Area 6 and on the gravel terrace on the edge of the terrace to the west of Areas 1 and 3. It would be of considerable interest to investigate broadly contemporary activity on different topographic locations, in order to establish whether differences which are apparent between the uses of these zones later in the Neolithic also exist for the earlier periods. Earlier Neolithic features have seldom been found away from monuments in the Upper Thames Valley and Yarnton Cassington offers an opportunity rarely encountered to explore evidence from this period in a different context. Dating the earliest Neolithic activity in the area is also of great importance.

15.4 Later Neolithic and Bronze Age

Prehistoric activity was widespread across the study area and was particularly dense on the floodplain.

Although many of the trenches excavated contained archaeological features, discrete areas and concentrations of activity can be discerned and a wide range of feature types representing a variety of activities has been detected. The potential for the analysis of variation in function between sites is of particular importance and the understanding on-site versus off-site activities. For this reason, substantiating the existence of apparent blank areas is crucial. A wide range of pottery styles and other finds is now known to be present which enhances the potential for examining feature and site function and is particularly important for the study of the chronological relationships between the major pottery groups and between their substyles. The variety of feature and find type, the different combinations in which they are found, the spatial context, the environmental background and the chronological framework are the great

strength of this project and underline its national importance.

The significance of this evidence for answering questions related to the economic base of these communities (such as the extent of arable/pastoral agriculture and the exploitation of cultivated/wild resources), their differential use of the different topographic zones in the area, the spatial and chronological relationship of a wide variety of archaeological evidence (domestic, deliberate, ceremonial, burial and burnt mound deposits) and related landscape issues (tree clearance, alluviation, changing strategies to cope with changing environmental conditions, tracing trackways from wet to dry ground) cannot be overemphasized. These are all questions fundamental to understanding the fabric and function of Neolithic and Bronze Age society.

The survival, not only of carbonized and waterlogged remains apparently of equal quality to those already recovered, but also of animal bone in floodplain areas is a significant contribution to the potential to obtain a fuller record of economic activity. Bone from the excavations in the east of the floodplain was poorly preserved because of the acidic nature of the soil; to the west the proximity of calcareous gravel to the surface has neutralized this effect. The presence of very young cattle bones from early contexts, as well as the preservation of cut marks and the recovery of some deer bone suggesting some exploitation of wild resources, demonstrates the potential wealth of the faunal data.

Many features excavated, although probably prehistoric in date (similar in character to prehistoric features already excavated, sealed beneath probably Roman ploughsoil or lying on low ground which would probably be too wet for habitation in later periods), did not contain finds or yielded undiagnostic flint or burnt stone. For this reason features are summarized by site before a review of the main periods of activity.

15.4.1 Gravel Island

The gravel island, a continuation of that examined in the Yarnton Floodplain excavations (Sites 1 & 3), appears to be the most intensively used area throughout this period (Fig. 1). A similar range of features was found to those previously excavated, suggesting that low-density domestic settlement spread across this area along with small discrete groups of pits containing deliberate deposits. The survival of such an extensive area of occupation, stretching over 1 km, is remarkable. Evaluation on the south side of the A40 (A40 Witney to Cassington evaluation) showed that the gravel island continued to the south.

Some new elements emerged from the evaluation on the gravel island, demonstrating that there is still a considerable amount of information to be gleaned from the diverse archaeological contexts located and their quality and extensive spread. In particular, the range of pottery types recovered

in the evaluation was greater than that previously found: Peterborough Ware in the Fengate substyle as well as Ebbsfleet and Mortlake Ware is now known from the site and both Durrington Walls and Clacton substyles of Grooved Ware have been found. The concentration of features in Area 6 (Fig. 14) is particularly notable for its range and density of material. It may be significant that this site lies opposite an area of activity in and on the north bank of a palaeochannel.

Perhaps the most impressive new elements of the archaeology of the gravel island are the Neolithic rectangular enclosure which may be a mortuary feature and the Beaker burial/s (Fig. 17 & Plates 1 & 2). These monuments will make an important contribution to the understanding of the emerging ceremonial landscape, the possible separation of funerary sites from other ceremonial sites and the contrasting use of the floodplain and the second gravel terrace at this time. The close proximity of the ceremonial and funerary sites to domestic features and deliberate deposits, all apparently spatially distinct, is of particular value for the investigation of functional and spatial patterns.

It is important to realize that there are, undoubtedly, important elements of this archaeological site which were not detected in the 2% sample. This is reinforced by comparisons between the evaluated and excavated evidence from the Yarnton Floodplain site to the east (see above Section 14.4).

15.4.2 The Palaeochannels and Related Floodplain Sites

Evidence for activity in and along the edges of the palaeochannels is present across the site and concentrated particularly in the central area of the main channel investigated in the evaluation, in Field 12 (Fig. 14). This lies opposite the most dense area of features in Area 6. Here an old ground surface survives sealed beneath alluvium and finds including flint and two late Neolithic/early Bronze Age sherds came from the surface, possibly *in situ*. Two posthole alignments leading to the channel and two causeways, one of sand and gravel which could be early (?Bronze Age) were found upon it. A wooden structure was located, possibly running along the north bank of the channel. A row of postholes was found opposite the structure along the south edge of the channel and a row of stakes further east also ran along the edge of the southern bank. A sherd of late Bronze Age/early Iron Age pottery came from one of the postholes.

Spreads of trampled stone, some burnt, survived in several places along the channel banks and further areas of buried ground surface were located in the southeast of Field 11 (Fig. 4A) and in Field 13 (Fig. 4C).

Other small sites were located between and near the channels on low gravel islands. These include small groups of postholes in the centre of Field 13 near the confluence of two channels, a group of postholes and pits in the centre of Field 12 near a late Bronze Age gully (Fig. 4C) and two sites

associated with burnt stone features and spreads. One of these sites lies mostly north of a shallow channel in the corners of fields 8, 11 and 12 (Figs 4A & 4C) and includes postholes as well as pits and burnt stone spreads. Another lies north and south of the channel running through the south of Field 9 (Fig. 4B). The posthole/pit groups are probably domestic in character; the function of the burnt stone features and spreads (?burnt mound material) is less certain.

15.4.3 Gravel Island in the Southwest

A gravel island in the southwest of the area was the site of activity/occupation in the earlier prehistoric periods. A ditch containing Grooved Ware was examined and Beaker pottery was found in a gully. A quantity of Neolithic and Bronze Age finds were also recovered from treethrow pits, later features and ploughsoils. It is not easy to disentangle the Neolithic and Bronze Age evidence from the later prehistoric activity in the small percentage investigated and thus the nature of this site is a little difficult to assess. A late Bronze Age settlement was situated on this gravel island.

All features in this area lie to the west of a long, linear boundary, the upper fills of which contained late Bronze Age and middle Iron Age pottery. The contrast between the density of features to the west and absence of them to the east of this ditch is marked (Figs 4A & 11).

15.4.4 Low-lying Ground in the South-east of the Area

South of a palaeochannel in the southeast of the study area was low-lying ground where a stable surface had formed over earlier channel silts. Part of this area was excavated in the Yarnton Floodplain excavations in 1992 (YFP). Parallel Neolithic ditches were examined associated with an old ground surface where a large quantity and range of *in situ* artefacts was recovered dating from the earlier Neolithic to the Beaker period. The assemblage included some fine artefacts, including leaf-shaped arrowheads and an edge-ground knife. A later linear ditch, a penannular ditch, posthole alignments and shallow-cut slots were also found, representing a very unusual range of features. The area probably had a ceremonial function and the preservation here of shallow features, which rarely survive on other sites, expands the repertoire of contemporary monumental features.

The southeast of the gravel pit has mostly been extracted and the extent of the ceremonial site and ground surface to the east, in Oxey Mead for example, is uncertain. Part of a buried ground surface and a few associated flints were recovered, however, on the southern edge of a trench excavated across the palaeochannel in Oxey Mead (Fig. 1) suggesting that the buried surface may be extensive.

South of the A40 road, in the area of Yarnton Mead, evaluation for the A40 North Oxford Bypass demonstrated that the ground surface extended into

this area. A large ditch with very close similarities to the Neolithic linear ditches and, like them, containing Peterborough Ware ran at 90° to their orientation. Another ditch resembled the dendritic ditches found on the Yarnton Floodplain site. The survival of part of this ill-understood site is of considerable importance.

15.4.5 The Second Gravel Terrace

The presence of flint scatters within the modern ploughsoil and of occasional features is witness to the use of the gravel terrace in the earlier prehistoric period. This activity appears to have been much less intense than that on the floodplain and is possibly of a different nature. Features excavated on the gravel terrace to date have been pits containing deliberate deposits and no apparently domestic features have been recognized. The degree to which this reflects greater subsequent destruction on the terrace is, however, uncertain. The issue could be addressed by a comparison of the different constituents of the flint assemblages in the modern ploughsoil on the second gravel terrace, the modern and Roman ploughsoil on the floodplain gravel island and the old ground surface. Another approach could be the comparison of environmental remains from the surviving features.

The existence of a ring ditch on the Worton cropmark site was known before the start of the project and 19th century records indicate that Beaker burials were destroyed during the construction of the railway, south of Yarnton church (Rolleston 1884; *Victoria County History*, Oxon i, 266a).

Evaluation has shown that two further ring ditches may be present at Yarnton Mead Farm (Figs 22 & 23) and further examination of air photographs has identified a ring ditch to the west of Yarnton church. Inspection of records held in the Ashmolean Museum has found evidence of the existence of at least one other ring ditch which lay north of the railway line and was destroyed in the 1850s by gravel extraction for the railway embankment. Saxon graves were cut into one annular ditch, but some cremations are probably Bronze Age. The relationship of these features with the Beaker burials is, at present, uncertain. A Food Vessel and a neck-ring of almost pure copper were also found in this area. The neck-ring (Clarke *et al* 1985, 270-1, pl. 7.24) is currently on display at the Ashmolean Museum. The presence of burial sites on the gravel terrace may hint at a different use for the higher areas in the early Bronze Age. Did ceremonial/burial sites move up from the floodplain at an earlier date than domestic sites and, if so, why? Were the barrows placed on more peripheral land, or land more recently cleared? Alternatively, do these monuments replace those which had been constructed further afield, in the Cotswolds for example, thus suggesting a more restricted territorial range for Bronze Age populations than for earlier ones?

A variation to the usual record of gravel terrace archaeology was the

discovery on the edge of the terrace of a buried ground surface surviving in the tops of treethrow pits (Area 2). Burnt treethrow pits lay nearby. The nature of this deposit was uncertain but it could be associated with tree clearance. If so, the presence of sherds in the deposit, as well as flint, may mean that it is possible to date this clearance.

15.4.6 Tree Clearance

Treethrow pits were found throughout the area evaluated. Examples with burning in their top fills, possibly indicating that stumps had been burnt *in situ*, had a more defined spatial pattern. Groups were identified in the east of Field 11 (Area 5), in Area 7, the southwest of Area 4, on the southern edge of Area 2 and along the edges of the palaeochannels (Fig. 2). It could be that these groups represent a concerted effort at tree clearance at a relatively late date in an otherwise cleared landscape, though whether as a single operation cannot be ascertained from current information.

The recovery of finds from these features was most common in Area 7, in the southwest of Area 4, and along the southern edge of the palaeochannel in the south of Field 9. These finds were usually of flint, especially in Area 4, and burnt stone. In Areas 4 and 7 the finds probably suggest that occupation was already present or immediately followed tree clearance, the hollows serving for rubbish disposal or as places where debris accumulated naturally. The value of treethrow pits as receptacles for rubbish which had not been deliberately placed was recognised on the Yarnton Floodplain excavations. The quantity of burnt stone and flint in treethrow pits in Trenches 72, 77 and 81 was notable, although whether this reflected clearance in an area of earlier burnt mound deposition or whether burnt mounds were associated with tree clearance merits further investigation. A sherd of late Neolithic/early Bronze Age pottery, possibly Beaker, was recovered from an old ground surface next to burnt treethrow pits. Does this suggest a date for this clearance?

15.4.7 Later Neolithic: Peterborough Ware

A rectangular enclosure, approximately 60 m x 27 m, was located on the gravel island in the southeast of the evaluation area, adjacent to the Yarnton Floodplain excavations (Fig. 4C). Flint and Peterborough Ware in the Fengate substyle came from an upper fill in the ditch. This feature has parallels in the region, for example at Dorchester on Thames (Whittle *et al* 1992), and nationally, for example at Fengate (Pryor 1988) where they appear to be mortuary enclosures. The enclosure lies on the opposite bank of a palaeochannel from the ceremonial site excavated in 1992 (Yarnton Floodplain, see above 15.3.4). The spatial and chronological relationship of the enclosure and the more extensive complex is of great importance in understanding the unusual ceremonial landscape which seems to be emerging on this site. If the rectangular feature is associated with burial practice, it represents a new element in the archaeological record on this

site. It is of note that the main Beaker burial found in the evaluation lay immediately north of the enclosure.

Pottery in the Fengate substyle had not been found on the site before the evaluation but was recovered not only from the enclosure but from a pit in the concentration of features in Area 6.

Other features containing Peterborough Ware were found on the floodplain a little to the north of the enclosure and in the concentration of features in Area 6 (Fig. 4C). A ditch in the A40 North Oxford Bypass evaluation also contained some Peterborough Ware. The quantity of features with Peterborough Ware in the 1993 evaluation is considerably higher than in the Yarnton Floodplain evaluation .

A pit with Mortlake Ware was excavated on the Yarnton Gravel Terrace site (YWRF) and is currently being analyzed. Carbonized remains were well preserved within the pit, including hazel nut shells and apple pips but also a little barley. Although no contemporary material was recognized on the gravel terrace in the evaluation its potential survival elsewhere on this topography is good. This is important for the understanding of the different uses of floodplain and gravel terrace at this time.

15.4.8 Later Neolithic: Grooved Ware

Several features were excavated on the floodplain containing Grooved Ware. These were mostly pits lying amongst the concentration of features in Area 6 (Fig. 4C). A sherd of Grooved Ware also came from a ditch in the west of Area 4 (A40 Witney to Cassington evaluation) in an area where other earlier prehistoric material was present (Fig. 4A).

On the Yarnton Gravel Terrace site (YWRF) a pit was excavated full of flint which had affinities with Grooved Ware flint assemblages. It had a small animal cremation in the top . No Grooved Ware features were encountered on the gravel terrace during the evaluation. This may reinforce the suggestion that activity on the terrace was less intense, and possibly of a different nature at this time.

15.4.9 Beaker and Late Neolithic/Early Bronze Age

A fine Beaker pot was found within a flat grave, at the foot of a crouched inhumation (Plate 1, page 5). It was a tall, slender vessel, and contained a smaller, coarser Beaker which had been tempered with bone, and an end scraper. Six barbed and tanged arrowheads lay in a group beneath the pelvis; they may have been in a pouch. The analysis of the grave contents (Plate 2, page 5) and their associations will contribute to the study of Beaker funerary practice. The burial lay just to the north of the rectangular enclosure. Beyond the burial lay a large pit filled with clean pale sandy clay within which a posthole was positioned. Its function was

unclear.

This was the first certainly prehistoric human burial to be found in the study area and represents a new aspect of the archaeological record. Lying west of this burial was a less well-preserved crouched inhumation which contained a small, worn decorated rim sherd, possibly Beaker. There is thus potential for locating other burials in this area. An undated inhumation which may also be prehistoric was found to the south of the A40 road, south of Area 4, in the A40 North Oxford Bypass (N102) (Fig. 4A).

Sherds of late Neolithic/early Bronze Age pot came from one of the small features exposed south of the A40 (A40 Witney - Cassington Evaluation, H16 & H17, Fig. 4C) which lay on a continuation of the main gravel island, a burnt stone pit belonging to the site around a palaeochannel in the corners of Fields 8, 11 and 12 amongst otherwise undated features and the buried ground surface on the north edge of the palaeochannel in Field 12 (Fig. 4C).

A Beaker sherd was recovered from a shallow gully in the southwest of the site (Area 4) with burnt stone and bone. This was the only certainly Beaker sherd to be recovered from the floodplain in a non-funerary context in the 1993 evaluation. Evaluation and excavation on Yarnton Floodplain exposed several pits containing ?deliberate deposits with 'domestic' Beaker pottery. These pits were dug in small groups and such clusters seem to be particularly difficult to locate in evaluations (see above Sections 14.3 & 14.4).

On the edge of the gravel terrace in Field 9 (Area 2) an old ground surface survived in the tops of treethrow pits (Fig. 4B). Burnt stone, fired clay, bone, flint and pot was found within the deposit, including a sherd of late Neolithic/early Bronze Age pot, possibly Beaker.

The recovery of Beaker burials during gravel extraction in the 19th century in the area of the Yarnton Saxon cemetery (Fig. 1) may suggest that at least some of the nearby ring ditches are Beaker in date. Comparing the form and contents of Beaker barrows (?on the gravel terrace) with the flat grave/s (?on lower-lying areas) and their relative chronology would contribute to studies of early Bronze Age burial customs. Two early Bronze Age sherds were recovered from fieldwalking over the Worton cropmark site near the ring ditch there.

15.4.10 Bronze Age

Apart from the Beaker material discussed above, no pottery of the early or middle Bronze Age was found in the evaluation. Experience has shown, however, that pottery of the middle Bronze Age is locally uncommon; no pottery of this period was recovered from the Yarnton Floodplain evaluation even though domestic occupation and channel-related activity of that date

was subsequently found. This may reflect the contemporary lack of pits with deliberate deposits and ceremonial sites. It seems likely that some of the undated features located on the floodplain in the evaluation are of this period. Several of the burnt mound spreads on the Yarnton Floodplain excavations, for example, were middle Bronze Age in date.

No middle Bronze Age features have so far been recognised on the gravel terrace at Yarnton or Cassington. How far this is a result of the effects of ploughing on fragile sherds, the absence of pits with deliberate deposits (the most usual form of earlier activity surviving on this topography) or the genuine absence of activity is very uncertain. The date of the ring ditches is, of course, not known.

The paucity of middle Bronze Age material so far recovered from the Upper Thames Valley stands in contrast to other regions such as the Kennet Valley where Bronze Age structures, fields and associated finds are commonly uncovered (Butterworth & Lobb 1992). Evidence from sites such as Yarnton is vital in order to understand the differences between these regions. Are many of the middle Bronze Age sites in the Upper Thames Valley located on the valley floor, beneath alluvium, where they have not previously been exposed or recognized?

15.5 Late Bronze Age and Iron Age

Late Bronze Age and early Iron Age features have been found in several locations in the study area in both Yarnton and Cassington and on both floodplain and second gravel terrace. The differences between these settlements and their land-use strategies is of great importance. These sites can make a significant contribution to understanding the development of a settled and bounded landscape and intensification of land use in the Upper Thames Valley in the late Bronze Age/early Iron Age. Is it possible that changes which are evidenced in other regions, such as the Kennet Valley, in the middle Bronze Age occurred in the Upper Thames region at a later date? The emerging variability in the settlement record at Yarnton Cassington in the Iron Age will augment important research already in progress on settlement patterns and agriculture in the region (Lambrick 1992).

Until recently few sites of late Bronze Age date were known in the Upper Thames Valley and, as in the middle Bronze Age, a period of low population and non-intensive land use was suspected. Once again, this contrasts with evidence from the Kennet Valley and the middle Thames (Butterworth & Lobb 1992, Moore & Jennings 1992). Recent fieldwork has uncovered several sites, including an important settlement near Eynsham and material from Gooseacre Farm, Radley which, added to earlier work at Wallingford, is leading to a reappraisal; the landscape may have been more

densely populated and the land more intensively and variously used than previously believed. The clarification of this pattern and the investigation of inter-regional variation in the settlement record would make an important contribution to the archaeological record of occupation, land use and periods of transition in the late Bronze Age and early Iron Age.

15.5.1 Yarnton Floodplain

Within Yarnton parish late Bronze Age/early Iron Age occupation was excavated on the floodplain in the east of the area where circular structures, pits, gullies and wooden structures crossing a palaeochannel were examined. Features of late Bronze Age date were found in the evaluation both on the main gravel island, where a well was examined of this date within the concentration of features in Area 6 (four postholes lay just to the north) and in the area of the palaeochannels (Fig. 4C & 14). A site in the centre of Field 12, where pits and postholes were found, appeared to be associated with a shallow ditch of late Bronze Age date. A row of postholes running along the south edge of the channel yielded a late Bronze Age/early Iron Age sherd. The wooden structure opposite and the row of stakes further east on the south edge of the channel could be contemporary.

With the exception of two ditches containing a little middle Iron Age pottery no evidence of later domestic activity has been found on the floodplain in this area. It has been suggested that a rising water table at this time led to an abandonment of the area the for occupation.

15.5.2 Yarnton Gravel Terrace

The evaluation in Cresswell Field demonstrated that a settlement was established in the late Bronze Age/early Iron Age and that it mostly lies to the east of a dry river valley (Fig. 1). The settlement moved gradually eastwards through the Iron Age (and Roman and Saxon periods) and has been partially excavated on the Yarnton Gravel Terrace site (Fig. 24). The relationship between late Bronze Age occupation on floodplain and gravel terrace is not yet known. The shift of occupation to the terrace seems to be accompanied by a more fixed location of settlement, a true village.

A few features of late Bronze Age and Iron Age date were found within the evaluation to the west of this dry valley, spreading across the gravel terrace (Fig. 4B). There is no doubt that this activity is much less intense than that of the village site, but it may indicate that the pattern of occupation is more complex than at first appeared. Current analysis of the Yarnton Gravel Terrace (YWRF) Iron Age pot indicates that there is more late Bronze Age/early Iron Age pottery to the east than had previously been appreciated.

Part of the Iron Age village on Yarnton gravel terrace has already been excavated. With its circular structures, house gullies, grain storage pits etc.

it is typical of Iron Age settlements in the region. Atypical is the quantity of information on the origins of the site.

15.5.3 Cassington Floodplain

In Cassington the settlement record for this period seems a little different. As on Yarnton floodplain, late Bronze Age occupation is represented by house structures and gullies (the palaeochannel lies beneath the A40 road and cannot be investigated), but in this case it appears to have been delimited by a boundary ditch (Fig. 11). Unlike Yarnton, occupation continued on this site, apparently through into the first century AD. Features in the later Iron Age are not as dense, however, as on contemporary sites both on the gravel terrace and the floodplain farmsteads found just to the south. Ditches south of the main area of occupation (in Field 10) may represent small fields and paddocks or may have been dug as drainage ditches to cope with the rising water table.

Two small middle Iron Age sites have been located to the south of Area 4 in the A40 Witney to Cassington Evaluation (Figure 1, element 5). They are similar to other middle Iron Age pastoral farmsteads found elsewhere on the floodplain in this region but none have so far been investigated in conjunction with their adjacent, contemporary gravel terrace sites. No sites of this type have been found at Yarnton.

15.5.4 Cassington Gravel Terrace

A sherd of late Bronze Age pottery was recovered in the fieldwalking exercise in the field north of Worton (Field 7). A few later Iron Age sherds were also found in this vicinity. This may represent a continuation of low-density activity of this date across the second gravel terrace.

No late Bronze Age material was located in the evaluation on this part of the gravel terrace and there is no record of material of this date in the records of finds from the adjacent Tuckwell's pit (Fig. 1). It may, however, not have been recognised or retrieved in the limited salvage work that took place.

Iron Age occupation was, however, clearly present in Tuckwell's pit (Leeds 1935; Harding 1972, 19-21). The limited, published evidence suggests that this site was similar to the Yarnton Gravel Terrace Iron Age village, its neighbour to the east. The relationship of the gravel terrace site and the settlements on the floodplain is of great interest. In the first century AD gravel terrace settlement had shifted to the east and was examined in the 1993 evaluation within Area 1.

15.6 The Late Iron Age and Roman Periods

The examination of adjacent settlements within the Roman rural landscape has rarely been possible and the interrelationship of these sites and their relative status is often uncertain. The ability to trace the development of these sites from the late Iron Age into the early Roman and from the early to late Roman periods renders the Yarnton Cassington sites of particular significance. The wide range of land use evidence is also seldom available.

A large part of the Roman settlement of Yarnton, a low-status rural site, has been excavated (YWRF) (Fig. 24). Roman occupation at Worton had already been ascertained from air photographs and quantities of both early and late Roman pottery recovered from the area in fieldwalking. The current evaluation assessed the southern part of the cropmark site and found a complex of intercutting ditches and pits of both early (including some late Iron Age/early Roman material) and late date (Fig. 5). A stone oven and part of a wall were also located. The wall and the recovery of some tile from the features may hint at a slightly higher status than the Yarnton site.

The cropmark plot of the northern complex of features on the Worton site indicates that the settlement may have shifted slightly and become more organized and rectilinear with a possible trackway running ESE-WNW on its southern edge (Fig. 26). Several parallels for this kind of settlement shift, with later sites apparently linked to an extensive track network, can be found in the Upper Thames Valley. Late Roman pottery was found over this area. However, attention must also be drawn to the similarities of this complex with the middle Saxon layout at Yarnton in an area where late Roman pottery had also been recovered (see below).

There is some evidence of Roman ploughed fields on the second gravel terrace, between the two settlements. It was difficult, however, with the paucity of dating material from the ploughsoils to distinguish between Roman and medieval (and post-medieval) layers. Roman ploughsoil was found extensively on the floodplain, however, indicating that the Yarnton and Worton communities had fields in this area. Several large arable plots can be identified, lying between the palaeochannels, and apparently subdivided by field ditches. Fieldwalking and finds recovery from machine trenches show that the fields were manured and, where diagnostic, finds were early Roman in date. Field ditches were in some cases interstratified with the ploughsoils and there are indications that these were being recut to counter flooding from the channels later in the Roman period. A series of ditches south of the channel in the south of Field 9 illustrated this well, as did evidence of the spread of alluvial deposits within the entrance to a ditched arable field on the Yarnton Floodplain excavations. The relationship of these events to the increasing presence of weeds of damp ground species on gravel terrace settlement sites in the Upper Thames Valley in the later Roman period may indicate increasing flooding of

existing fields rather than a spread of arable onto damper ground, as previously thought (Lambrick 1992). This subject merits further investigation.

15.7 The Saxon Period

The extent of the survival of early and middle Saxon settlement and associated landscape evidence at Yarnton and Cassington is remarkable. The location of these sites within a continuously occupied and settled landscape from the late Bronze Age has tremendous significance for the understanding of settlement continuity and dislocation throughout the period. Evidence suggests that local settlement foci remained unchanged from the Roman period and the Yarnton evidence indicates that some changes in the economy, such as crops grown, did not occur until the middle Saxon period. Although there appears to be little coherent organization within the settlement sites until the middle Saxon period, the villages are discrete, unlike West Heslerton or Mucking, for example, where settlement was dispersed over considerable distances (Powlesland 1990; Hamerow 1993).

The vast majority of the information for the Saxon period in the study area has so far come from Yarnton. Comparing this data with that from Worton could establish the degree of variability between adjacent settlements at a time of far-reaching change. There is a good background of information on Saxon settlement from the local area which provides an excellent framework for future investigation.

15.7.1 Yarnton

The Saxon settlement at Yarnton was excavated in 1990/1 (YWRF). Early and middle Saxon features were excavated and a wide range of settlement evidence was examined including timber halls, sunken-featured buildings, smaller wooden structures, pits, wells and a smithy (Fig. 24). Timber halls had not previously been excavated in the Upper Thames Valley. Faunal and macrobotanical remains on the site were well preserved. The site had a coherent rectilinear layout with gullies, fencelines and enclosures.

The cemetery for the settlement was discovered in the 19th century during railway construction and associated gravel extraction and seems to have been largely destroyed by these. Evaluation in advance of tree plantation by OAU in 1991 indicated that extraction was extensive and this was reinforced by the magnetometer survey in the area this year. Metal detecting over one area that had possibly not been disturbed, produced no readings.

15.7.2 Worton

Saxon activity had been detected at Worton during fieldwalking and some pit-like marks on the air photographs were believed to be sunken-featured buildings. Machine trenching in this area during the current evaluations exposed two of these structures. Both have compacted surfaces in their bases and one may have a hearth. The cropmark plot demonstrates the extensive area over which these structures spread (Fig. 26). However, there was no indication that they spread further east and no Saxon features have been found between the Worton and the Yarnton sites.

A small, rectangular cropmark in the south of Field 6 is remarkably similar in dimensions to the timber halls on the Yarnton site. Another, similar feature, possibly overlying earlier pits, lies to the north and one Allen photograph (Allen 260) may show another further north, within the rectilinear complex. If these were timber halls, presumably with foundation trenches rather than of simple earth-fast post construction, this would be an extremely significant site. There is a considerable amount of uncertainty about the status of these buildings in England, partly hinging on their rarity, which the examination of halls from adjacent villages would help to resolve.

The rectilinear enclosure system surviving on the Worton cropmark site resembles the layout at Yarnton in many ways. The recovery of Saxon sherds from this area in fieldwalking and the presence of Saxon structures may support this (late Roman finds were recovered from the ploughsoil above the mid Saxon settlement at Yarnton). These sites are so rare nationally that the survival of two adjacent sites of this type would be extremely important.

The cemetery of the Worton site was found during gravel extraction in Tuckwell's pit and some house building to the west (Fig. 1). Metal detecting and research during the current evaluations suggest that the gravel pit was quite large and there is probably little undisturbed ground between the pit and the edge of the future gravel extraction area. Any surviving cemetery would lie under housing on Bell Lane.

15.7.3 Environment

Evidence for Saxon land use and landscape is being retrieved both from excavations on the gravel terrace (well-preserved animal bones and carbonized plant remains and a few waterlogged wells on the Yarnton gravel Terrace settlement site (YWRF)) and opportunistically during evaluation and excavation on the floodplain. Evidence for a slow-down of alluviation within palaeochannels at this period may indicate the reduction of arable within the catchment and ?woodland regeneration. Animal trample associated with waterlogged Saxon layers shows that the floodplain was grazed and further analysis of the pollen should resolve whether a hay meadow flora was established at the time. The channels seem to have been

reduced to a series of ponds by this period; some of the ponds were used for flax retting.

15.8 Saxo-Norman

A Saxo-Norman field system cut across the middle Saxon Yarnton village. The similarity of alignment of some of the ditches detected by the magnetometer survey to the northeast, south of the church, suggests that this system may continue (Figs 22 & 23). No clearly domestic features were found by the survey but this is to be expected. A dense scatter of pottery in Field 16 may indicate that settlement lay in this area. Another potential site would be next to the railway bridge (Jope 1945, 97-9). The survival of a site of this period here would provide the link between the middle Saxon settlement and the medieval village around the church.

Some of the ditches of the rectilinear field system at Worton, as at Yarnton, may be Saxo-Norman in date.

The study of the origins and development of the English medieval village has great potential within this project.

15.9 Medieval

The study of adjacent, though possibly dissimilar, medieval villages in the framework of continuity of settlement from the Saxon period can rarely be achieved and has considerable significance for the understanding of the development of these communities. As with earlier periods, the survival of evidence linked to land use and the changing environment is of great importance.

The medieval centre of Yarnton lay around the church and, although the modern village has shifted northward, some medieval buildings remain. The Victoria County History provides information on the medieval village and further documentary research could probably produce more detailed data.

The medieval settlement at Worton is now much reduced in size. Field observation suggests that house platforms exist south of the modern hamlet and this will be tested by earthwork survey. The magnetometer survey undertaken was not very successful. Comparison of the different techniques used for assessing these types of sites is of great interest. Further study of documentary sources and mapping house plots from tithe maps would provide more detailed information on the layout of the later medieval village.

Yarnton and Worton are separated by the parish boundary. Worton lies in the parish of Cassington and never had its own parish. The antiquity of the boundary and the reasons for Worton being subsumed within Cassington parish are important research questions related to the origins of the parish system and the formation of village boundaries. Evaluation showed that earlier ditches survived along the modern parish boundary but that these were difficult to date. Any further investigation of the ditches could be tied in with other research.

Evidence for medieval ploughed fields was found across the study area, though not as commonly as Roman arable. Finds and documentary sources suggest that the open fields of Worton lay over part of the cropmark site to the west of the hamlet. Yarnton open fields probably lay north of the village. Otherwise, it is suggested, medieval arable occasionally spread onto the floodplain, possibly in the late 13th/early 14th century when pressure on land was at its greatest, but that generally lower-lying land was pasture. The antiquity of the hay meadows, famous because of early ecological studies on the area, should be established by the analysis of pollen from waterlogged deposits within the palaeochannels. Increased alluviation occurred in the channels in the medieval period, finally filling them and causing overbank flooding and alluviation. This may have been precipitated by the resumption of ploughing on gravel terraces upstream.

15.10 Dewatering and Desiccation

Waterlogged material was found in this evaluation and its survival is significant for the potential of the site. It was hoped to locate conditions where a range of material survived together, providing suitable deposits for monitoring decay due to dewatering. The row of stakes along the south bank of the channel were driven into gravel and not associated with good macrobotanical remains. Other areas where macrobotanical remains survived had no waterlogged wooden finds. The timber structure which was located on the north bank of the channel in Field 12 was driven through deposits where organic preservation did not otherwise appear to be very good. Unfortunately this trench was so dangerous that it had to be backfilled before it could be sampled or investigated by Mark Robinson. Were any monitoring to be undertaken at least two different locations would have to be selected.

The destruction of waterlogged deposits through dewatering is still a serious threat, however, particularly in Field 12, the extraction of which will probably lag behind that of the adjacent gravel island to the south.

15.11 Evaluation Techniques

Geophysical survey has not been particularly successful on the Yarnton Cassington site, especially on the floodplain. Recent research has indicated some reasons for this lack of success and pointed to some avenues of future research which may improve techniques on these topographies.

by Neil Linford

The results of geophysical survey to date illustrate the extreme variation obtained from the differing geomorphological contexts of the evaluation area. The restriction of further work to one particular area, for example the area of cropmarks to the west of Worton Rectory Farm, would allow more detailed comparison between the geophysical results and other evaluation techniques. In particular the use of electromagnetic instruments (such as the Geonics EM38 used by the AML at Worton Rectory Farm) to produce both detailed surveys and values for conductivity/subsurface magnetic susceptibility over a large area (to determine geological/geomorphological variations) may well provide a key to establishing a global methodology for the geophysical evaluation of the entire site. Comparison with MSS data could also be included in this area from pre-recorded NERC flights.

The application of geophysical survey to the Yarnton Cassington project relies largely on understanding the relationship between archaeological remains and the geomorphological context within which they survive. In this respect the floodplain poses a particular problem, as the combination of ephemeral archaeology, alluvial overburden and subsequent waterlogging has produced extremely subtle magnetic anomalies often below the noise threshold of the modern topsoil. Identification of heavily alluviated areas may thus allow the diversion of magnetic survey techniques to more profitable ground and the concentration of deeper penetrating electromagnetic instruments (yet to be evaluated).

The use of ground resistance measurements has to some extent been limited by the time of year when the surveys have been conducted, the greater time required to cover a given area than by magnetic survey, and the suitability of the archaeological targets excavated to date. However, results from areas 1 and 2 demonstrate the potential of the technique to delimit geological contexts such as gravel islands. The use of resistivity profiling may also be of use over the palaeochannel, although similar reservations as to the suitability of the archaeological targets remain.

16. THE MODEL AND SUMMARY OF CONCLUSIONS

16.1 The Model

The model which was proposed before the evaluation was undertaken can now be refined and revised. This model is tentative and stands as a working hypothesis to be tested by future work.

It can be summarized chronologically:

Neolithic to Late Bronze Age

- a. settlement and funerary/ceremonial activity, mainly on the floodplain but funerary activity spreading onto gravel terrace in the early Bronze Age
- b. extremely widespread but low-density occupation consisting of short-lived, chronologically distinct foci of activity in an ever-shifting pattern of settlement; some evidence for domestic buildings, especially in the Bronze Age; burnt mound deposition and tree clearance at least since this period; spatially separate domestic and ceremonial areas; juxtaposition of domestic features and deliberate deposits on the floodplain
- c. burials spatially distinct from other ceremonial sites; ceremonial activity on low-lying areas with unusual range of features, particularly alignments of postholes and slots so shallow that they would not normally survive on more heavily eroded sites; burials on gravel islands in floodplain; barrows on gravel terrace in early Bronze Age, ?contemporary Beaker flat graves on floodplain
- d. a mainly pastoral economy, use of wild plant resources, small amount of (but increasing) cereal cultivation
- e. some degree of specialized activity associated with channels, particularly in the Bronze Age, such as burnt mound deposition, wood working, timber revetment and bridge construction
- f. relatively sparse and poorly preserved evidence of contemporary activity on the gravel terrace compared with the floodplain, possibly reflecting different uses of these topographies; pits with deliberate deposits in Neolithic, barrows in Bronze Age (are these linked?)
- g. ? final tree clearance in the earlier Bronze Age suggesting fully cleared landscape from that time

- h. evidence of external contacts through flint and other stone procurement and perhaps access to specialized potters in the Beaker period

Later Prehistoric

- a. development of more sedentary settlement in the late Bronze Age, first on the floodplain then the gravel terrace (or perhaps concurrently?), intensification of land use and increase in number of visible contemporary settlements
- b. rise in the water table resulting in the abandonment of domestic settlement on the floodplain in favour of the gravel terrace, though evidence of continuity of small-scale occupation at Cassington
- c. intensification and eastward creep of mixed farming settlement on the gravel terrace in the early-mid Iron Age; diversification of craft activities; continuation of deliberate deposition within features; local trade networks; a shift of the economic base towards arable, possibly located on edge of second gravel terrace
- d. intensive pastoralism on the floodplain in the middle Iron Age and re-occupation of floodplain for summer grazing shielings of Port Meadow, Farmoor type, at least in Cassington
- e. continued shift of gravel terrace settlement in the late Iron Age/early Roman period; abandonment of specialized pastoral farms on the floodplain in favour of enclosure of land to control grazing; ? further extension of arable

Romano-British

- a. continuation of the late Iron Age trends into the early Roman period
- b. continued use and slight shift of nucleated villages
- c. expansion of arable onto gravel islands in the floodplain in the early Roman period with associated manuring
- d. palaeochannels silting up as a result of rapid alluvial deposition
- e. increased flooding on arable fields in floodplain, at first solved by increased ditch digging
- f. decline of Iron Age traditions in the later Roman period; more rectilinear settlement layout; expansion of visible local track/road

network; increased trade and involvement in wider economic network

- g. first cemeteries associated with settlements

Saxon

- a. low-intensity, though possibly nucleated, settlement on gravel terrace, continuing eastward shift, though centred near earlier village foci
- b. cemeteries associated with settlements; grave goods indicating wide trade networks
- c. less intensive land management; no ditched land boundaries
- d. change in settlement character in the mid Saxon period; gradual settlement shift; larger, ?more prestigious structures; more regular site layout
- e. change in crops grown; ?fodder crops grown; possible specialization of animal husbandry
- f. floodplain used for grazing
- g. virtual cessation of alluviation; floodplain river channels reduced to series of ponds; use of ponds, eg for flax retting

Late Saxon-Medieval

- a. shift of gravel terrace settlement to an area around the present village church at Yarnton and around present hamlet at Worton; formalization of village boundaries and parish system
- b. re-intensification of arable on higher ground, ditched field boundaries
- c. floodplain mainly utilized as extensive common hay meadow, though occasionally with arable on gravel islands
- d. alluviation over all the floodplain area; creation of fish ponds next to old river channels

16.2 Summary of Conclusions

For all periods from the earlier Neolithic onwards the Yarnton Cassington Study Area has an important contribution to make to the national archaeological record. The model proposed above illustrates the range and depth of information available and the importance of pursuing developments in settlement and land use patterns through time. Trends which can be followed include the gradual intensification and shift of settlement, changing agricultural strategies from pastoral in the earlier prehistoric periods to arable in the Roman period (and back to pastoral again in the earlier Saxon period?), changes in burial practice from communal monuments, to burials of prestigious individuals to individual burial within communal cemeteries, gradual abandonment of ceremonial sites and deliberate deposits (at different periods) and changing trade networks.

For some periods the potential of the Yarnton Cassington study area is outstanding. These include:

1. *The later Neolithic into early Bronze Age.* Here a wide range of feature and site types survive. Pottery from them covers a wide spectrum of Peterborough Ware, Grooved Ware, Beaker and early Bronze Age styles. The presence within a limited compass of living sites, burials and other ceremonial elements, combined with the well-preserved environmental data (including evidence for land clearance) is exceptional. The diversity and quality of these strands of evidence and their clear articulation across the landscape make the site a significant one for understanding contemporary subsistence and social organisation.
2. *The late Bronze Age to early Iron Age.* In this period the landscape became more settled and occupation shifted from the floodplain to the second gravel terrace. The Yarnton Cassington evidence reinforces the existing view of population growth and corresponding intensification of land use, and makes it possible to examine the processes by which these came about.
3. *The Saxon period.* Here there is a considerable range of information on settlement location and layout with different building types, including rare timber halls, set in a framework of continuous settlement. The value of this data is enhanced by its capacity for integration into a wealth of information from nearby contemporary sites currently under investigation and by a well-preserved environmental record.

The most significant aspect of the Yarnton Cassington Study Area, however, is its continuous use in the past. Although *permanent* occupation cannot be demonstrated for the earlier prehistoric periods *persistent* use can be shown. From the later Bronze Age permanent settlements were established and can be investigated for all periods up to the present day. This is a truly remarkable survival enabling a full understanding of all aspects of settlement development from the early/mid Neolithic to the 20th century AD.

Continuous occupation at Yarnton Cassington is enhanced by the presence of adjacent, contemporary and complementary sites within the same block of land which offers opportunities for understanding variations in site function and status and inter-site relations within a progressively organised and managed landscape. The potential for reconstructing this landscape is high, and lies in a wide variety of sources, including on-site waterlogged and carbonized remains, material within and on the margins of palaeochannels, tree-throw pits, old ponds and buried ground surfaces.

A major asset of the project is the scale of the Study Area, a pocket-sized landscape, which allows the examination of landscapes in greater depth than that possible in more extensive field survey, whilst at the same time achieving a far wider, more integrated perspective than that afforded by excavation alone. The scale means that such an approach is feasible in terms of human and financial resources.

Investigation of a landscape covering different topographic zones with contemporary adjacent sites in explicit spatial relationships one to another is rarely undertaken, and indeed is rarely possible. The extent of inter- and intra-regional variability in the archaeological record for all periods is becoming increasingly apparent. Yarnton Cassington affords the opportunity to study long-term developments within a single locality, and thus to construct a far sounder settlement history than can be obtained by extrapolating between unconnected sites in disparate areas and of disparate cultural traditions. The Yarnton Cassington Project makes detailed investigation of a landscape an achievable goal.

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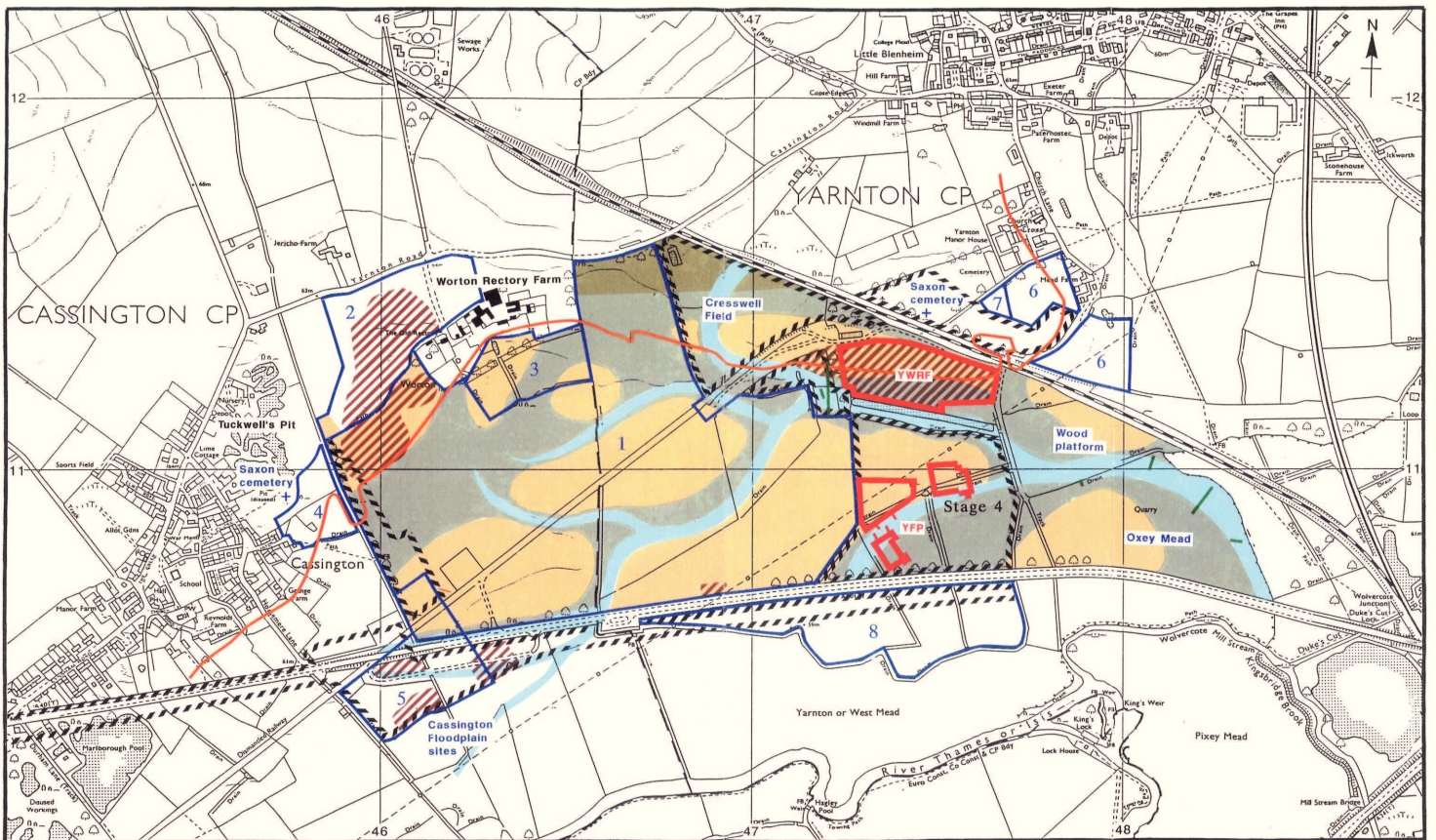
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scale 1:10000

- Gravel
- Alluvium and silty loam
- Palaeochannel
- Clay

- 1 Elements of the study area
- Excavated areas
- Areas previously evaluated
- Cropmark areas

- Approximate edge of gravel terrace (62 metre contour)
- Additional palaeochannel trenching

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Figure 1: The Study Area

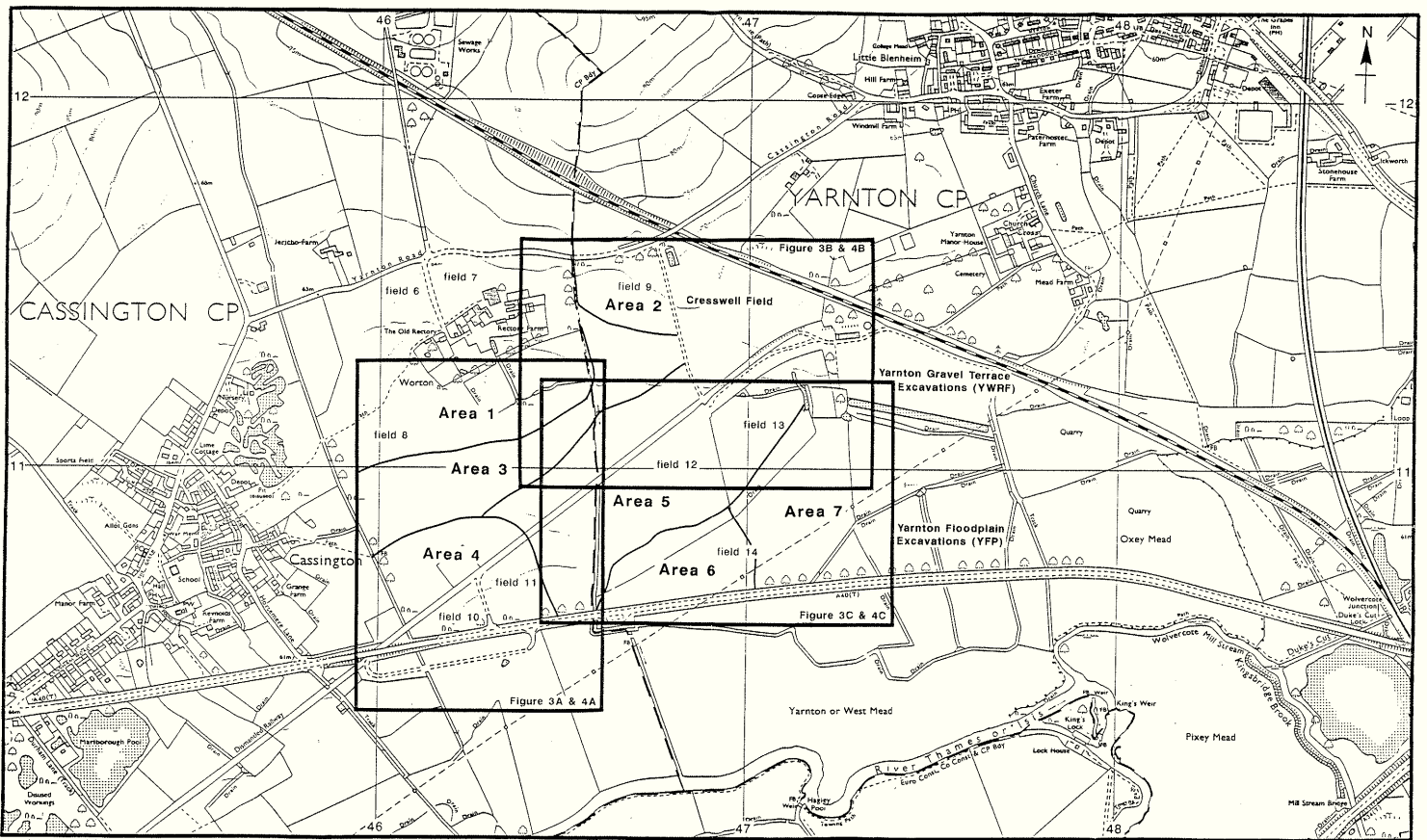


Figure 2: Key to trench location plans, field numbers and archaeological areas

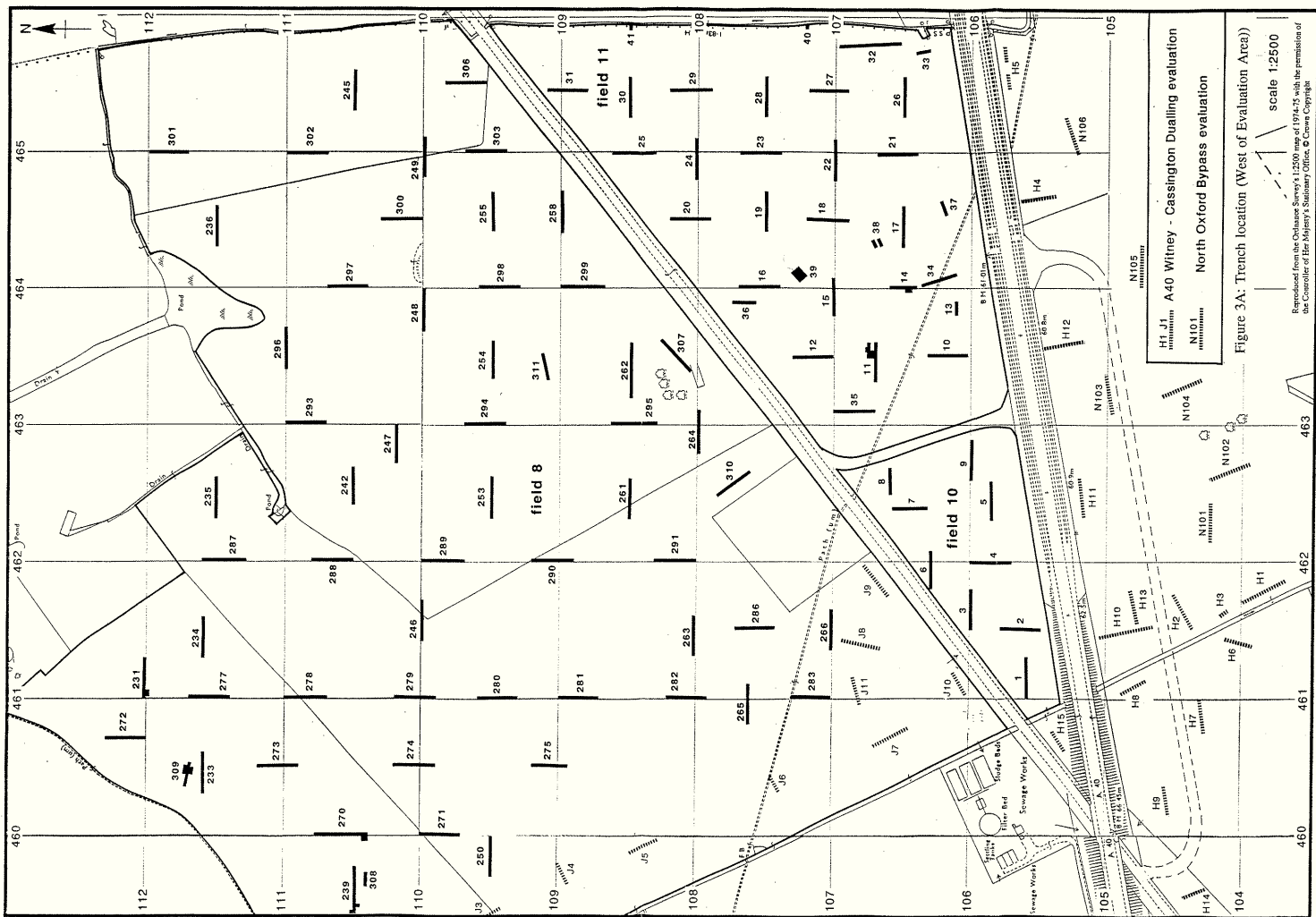


Figure 3A: Trench location (West of Evaluation Area)

Scale 1:2500
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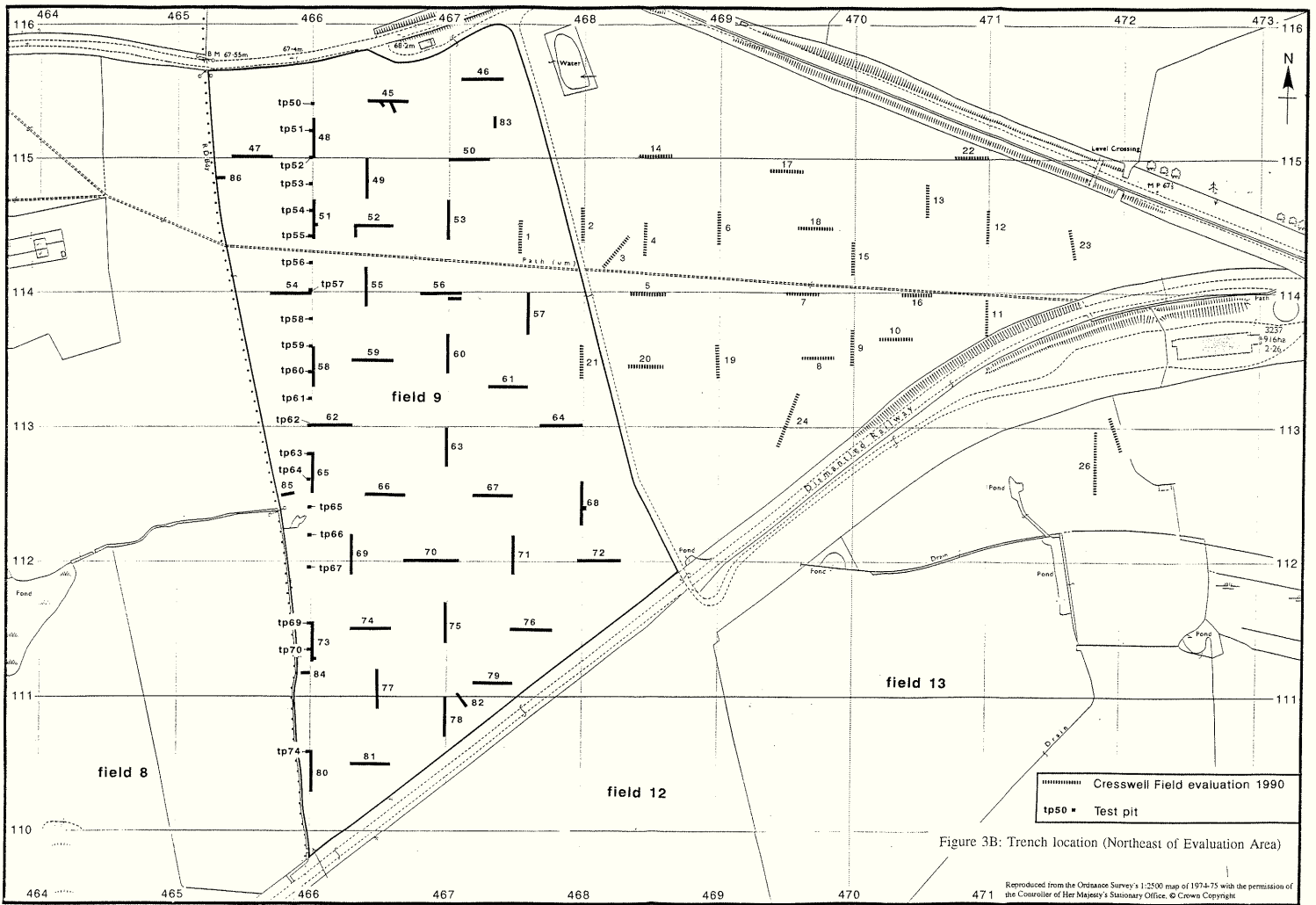


Figure 3B: Trench location (Northeast of Evaluation Area)

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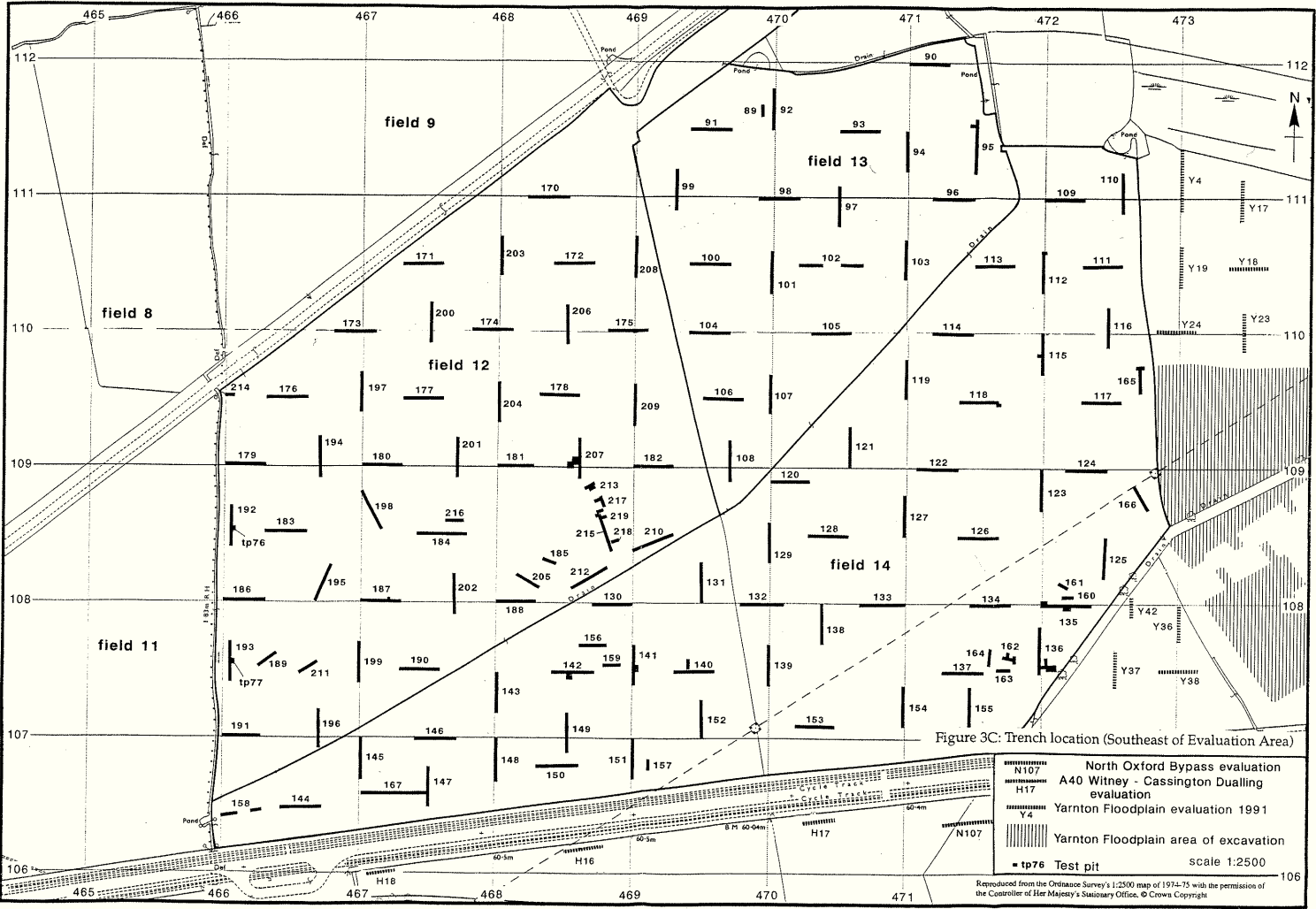
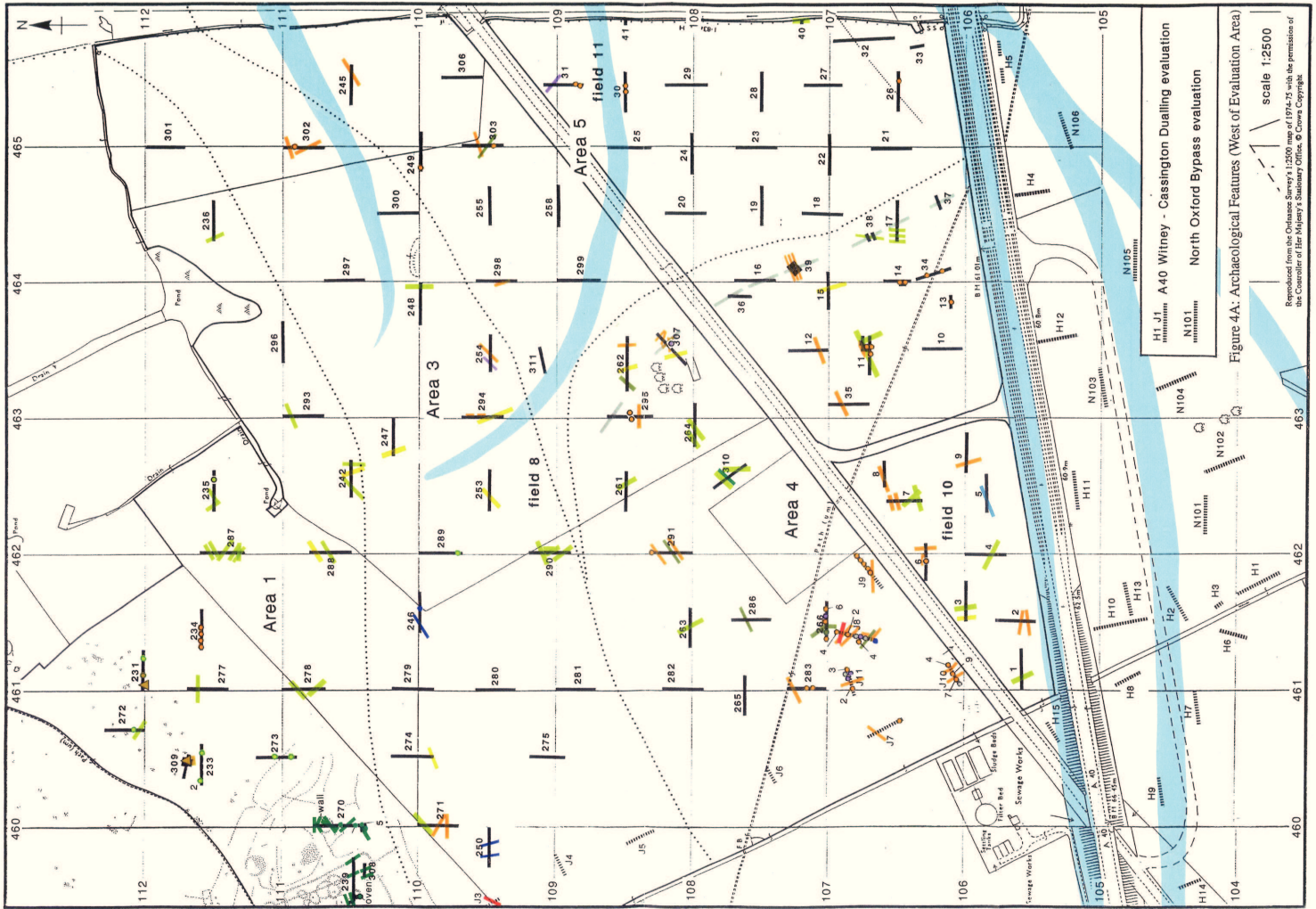


Figure 3C: Trench location (Southeast of Evaluation Area)

North Oxford Bypass evaluation
 A40 Witney - Cassington Dualling
 evaluation
 Yarnton Floodplain evaluation 1991
 Yarnton Floodplain area of excavation
 scale 1:2500

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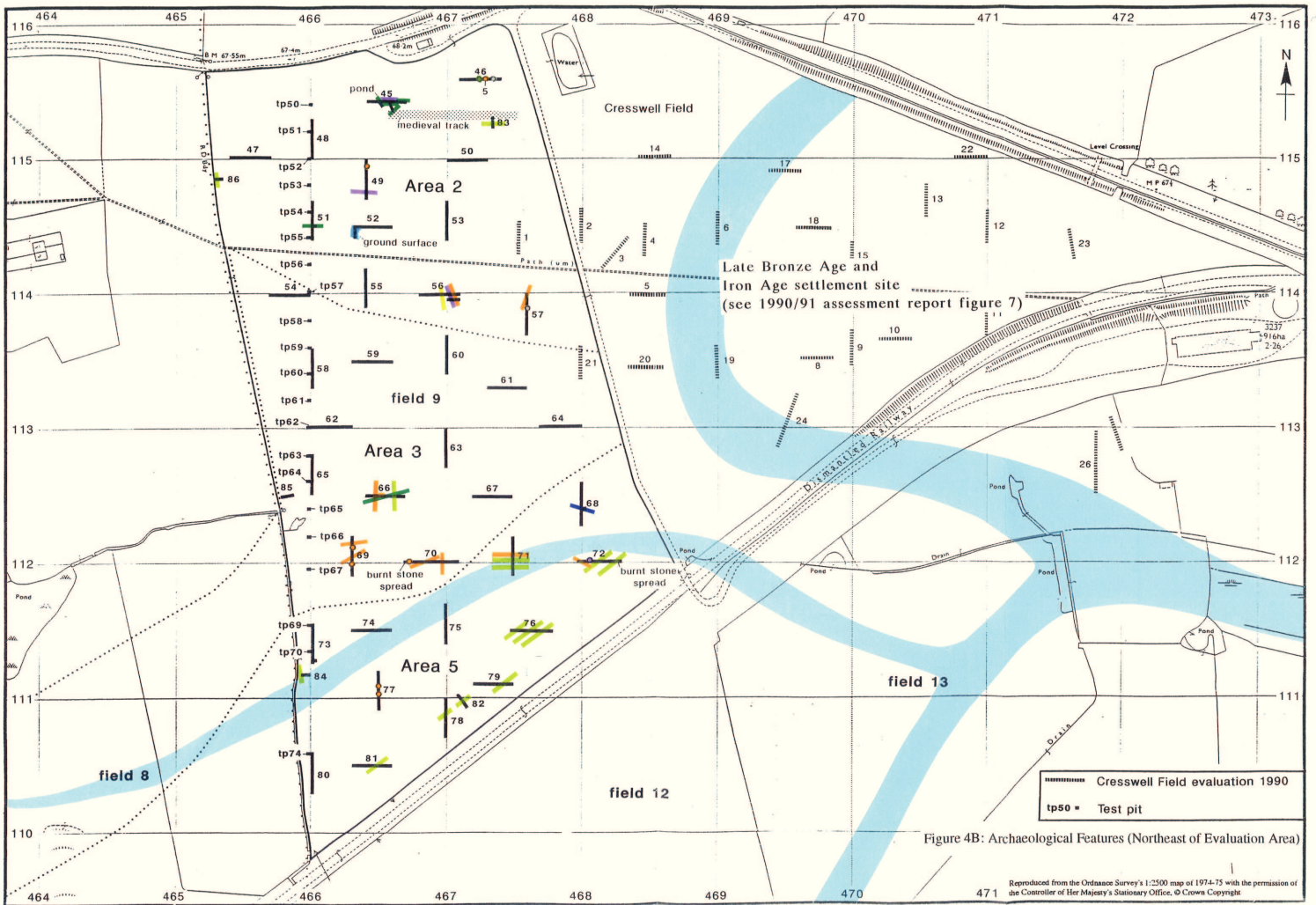
H1 J1
 A40 Witney - Cassington Dualling evaluation
 North Oxford Bypass evaluation
 Figure 4A: Archaeological Features (West of Evaluation Area)
 Scale 1:2500
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Yarnton Cassington

Legend for figures 4A, 4B & 4C

-  Ditch/ gully
 -  Pit/ posthole
 -  Cremation
 -  Grave
 -  Sunken-featured building
-
-  Neolithic
 -  Bronze Age
 -  Late Bronze Age/ Early Iron Age
 -  Iron Age
 -  Undated (probably Prehistoric)
 -  Late Iron Age/ Early Roman
 -  Roman
 -  Saxon
 -  Medieval
 -  Undated (probably Roman or Medieval)
 -  Post-Medieval
 -  Palaeochannel
 -  Edge of old ground surface
 -  Edge of archaeological areas
 -  Cropmarks

Figure 4: Legend to Figures 4A, 4B & 4C



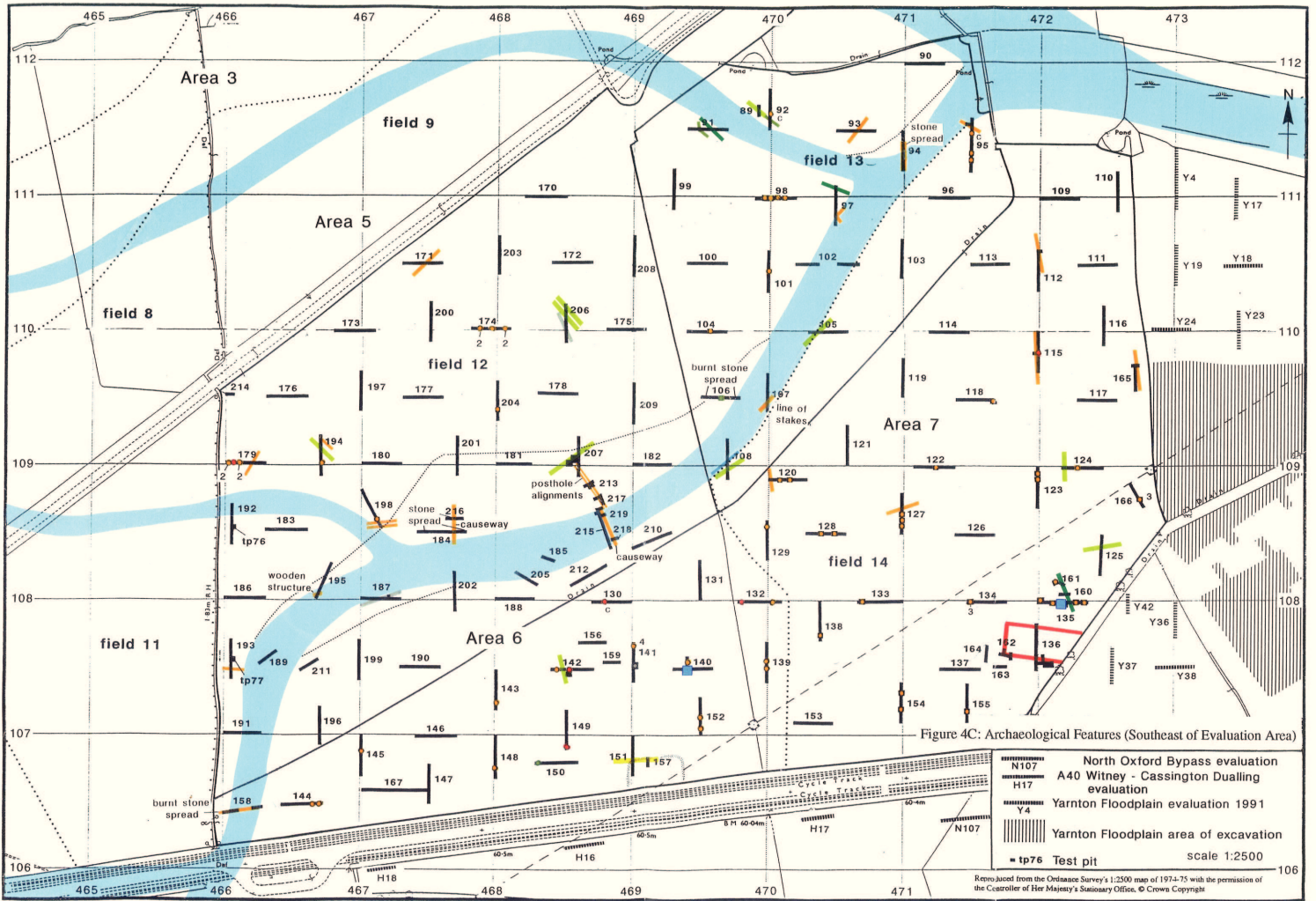


Figure 4C: Archaeological Features (Southeast of Evaluation Area)

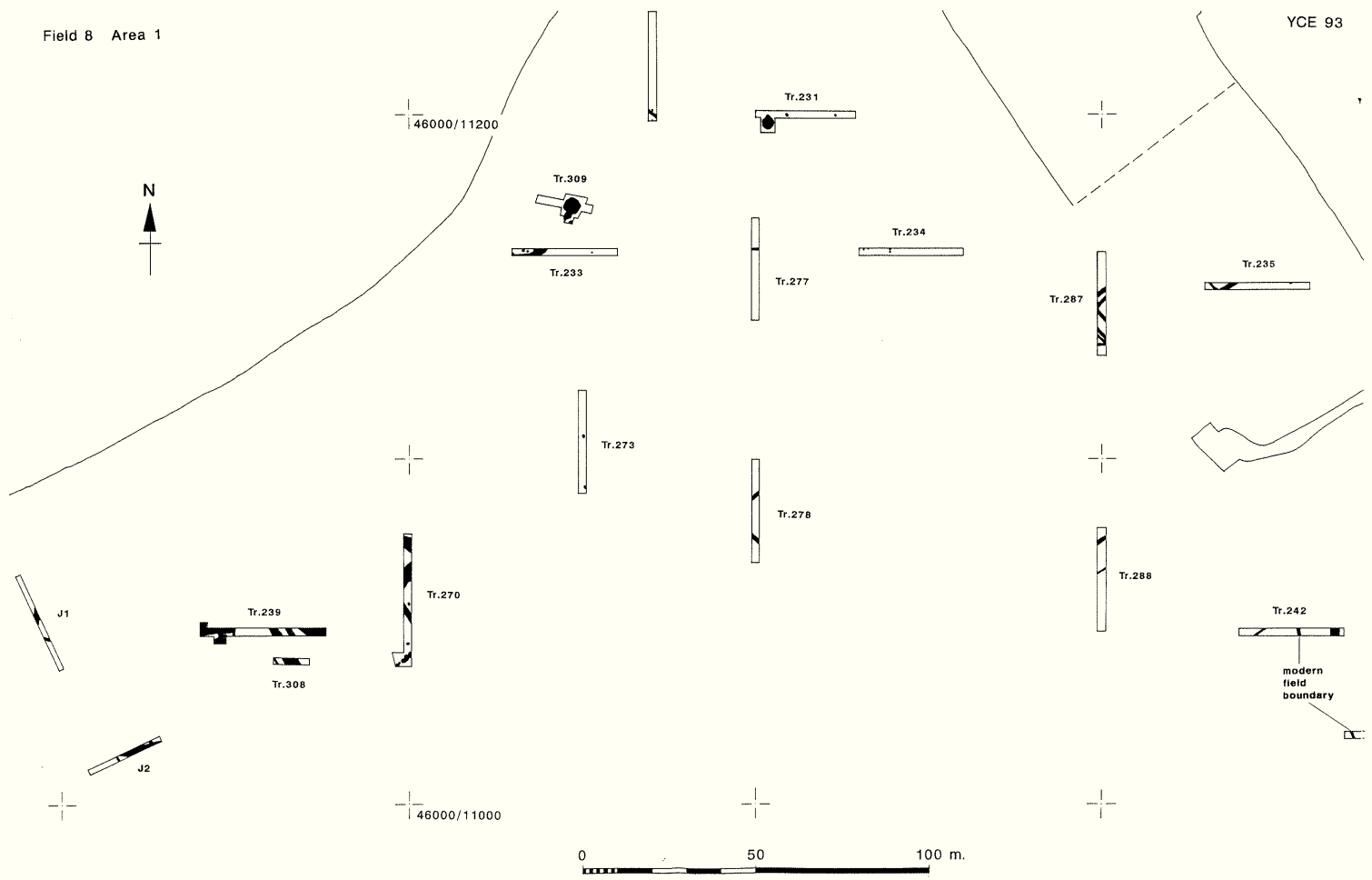
North Oxford Bypass evaluation
 A40 Witney - Cassington Dualling evaluation
 Yarnnton Floodplain evaluation 1991
 Yarnnton Floodplain area of excavation
 = tp76 Test pit
 scale 1:2500

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Field 8 Area 1

YCE 93

46000/11200



0 50 100 m.
scale 1:1000

Figure 5: Area 1 Contexts at 1:1000

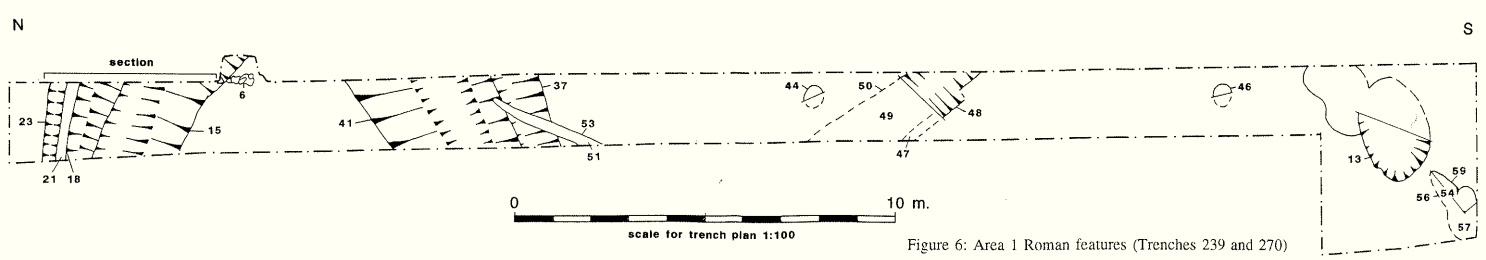
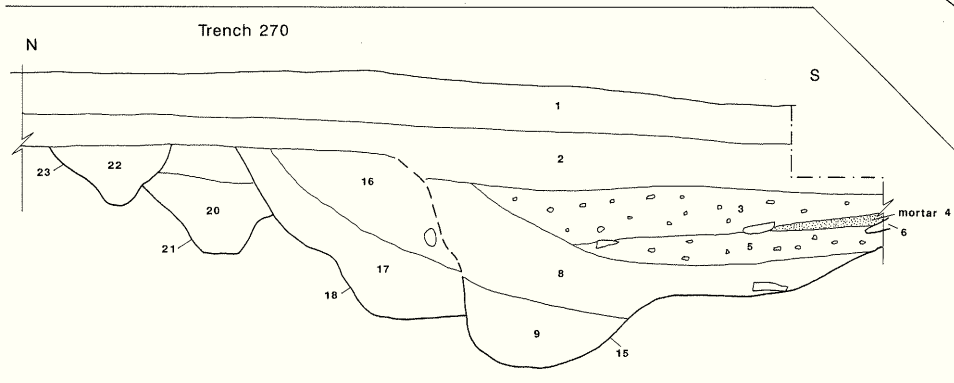
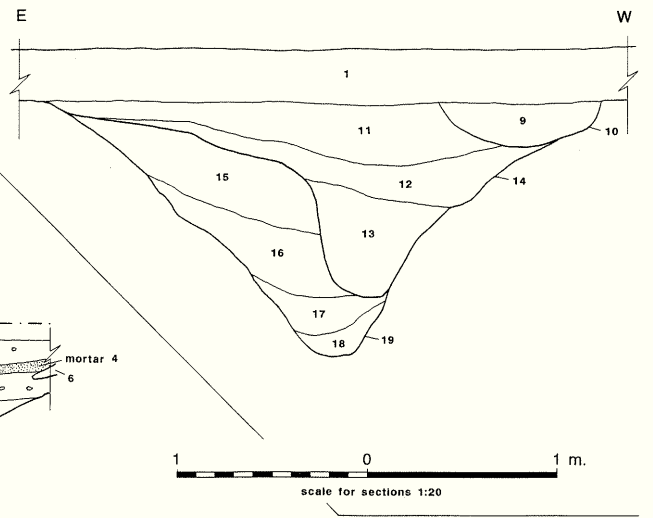
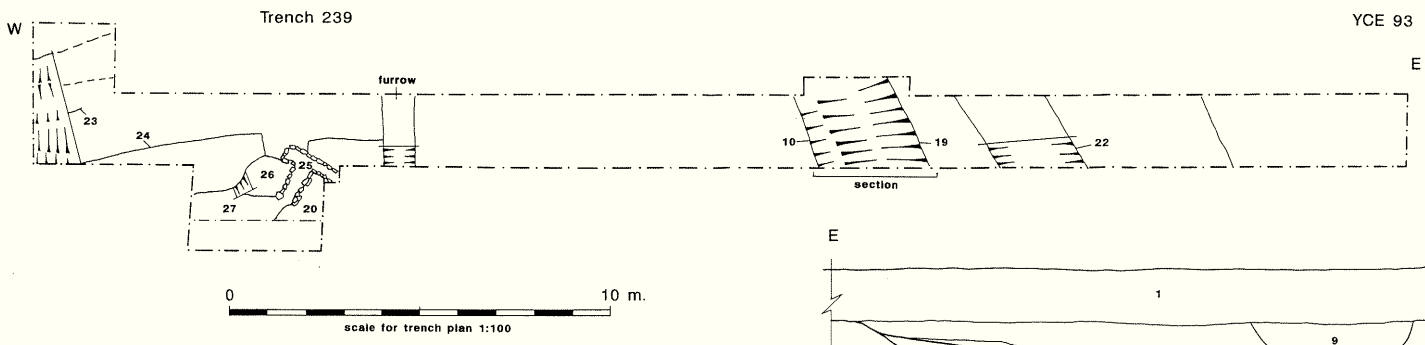


Figure 6: Area 1 Roman features (Trenches 239 and 270)

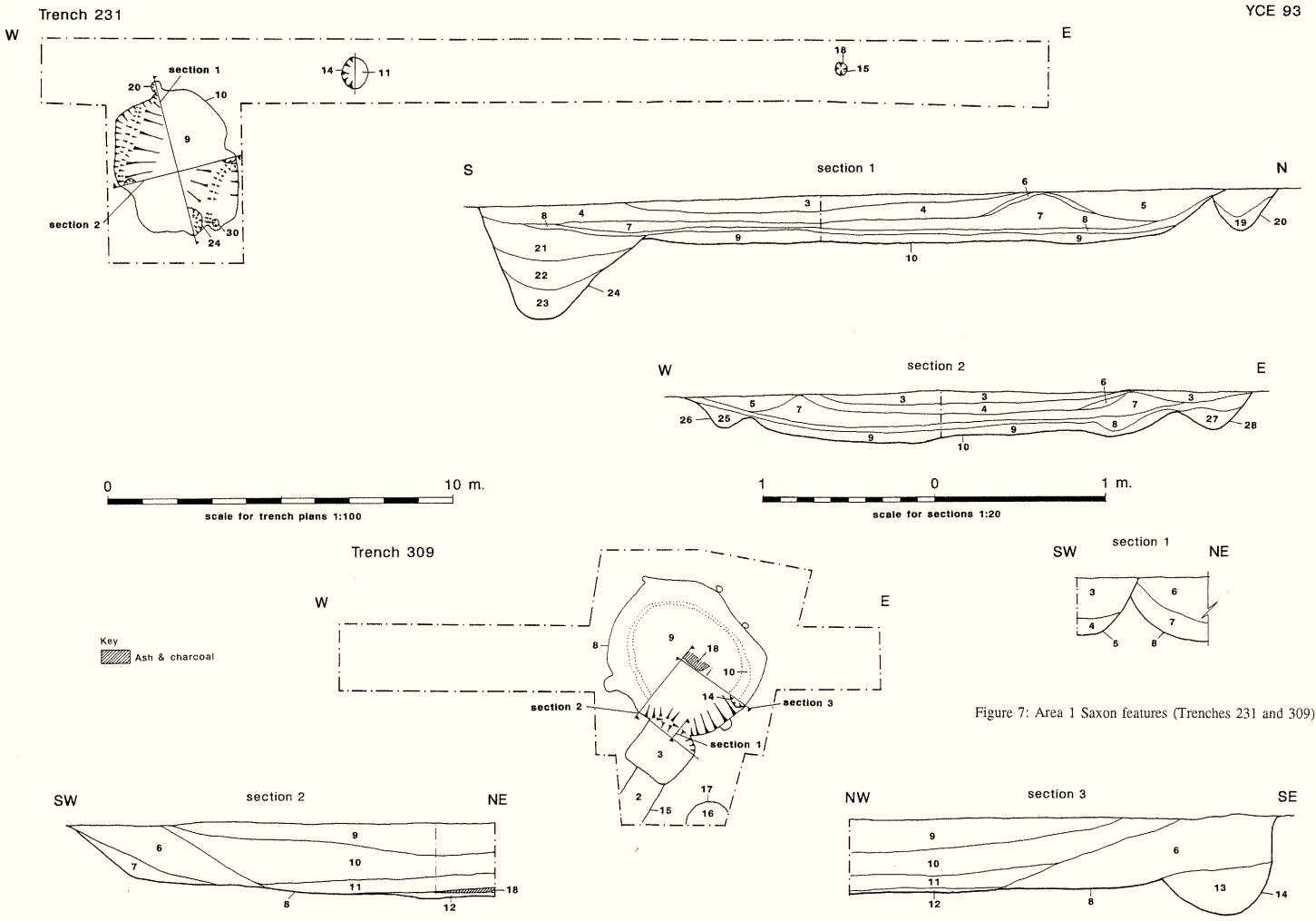


Figure 7: Area 1 Saxon features (Trenches 231 and 309)

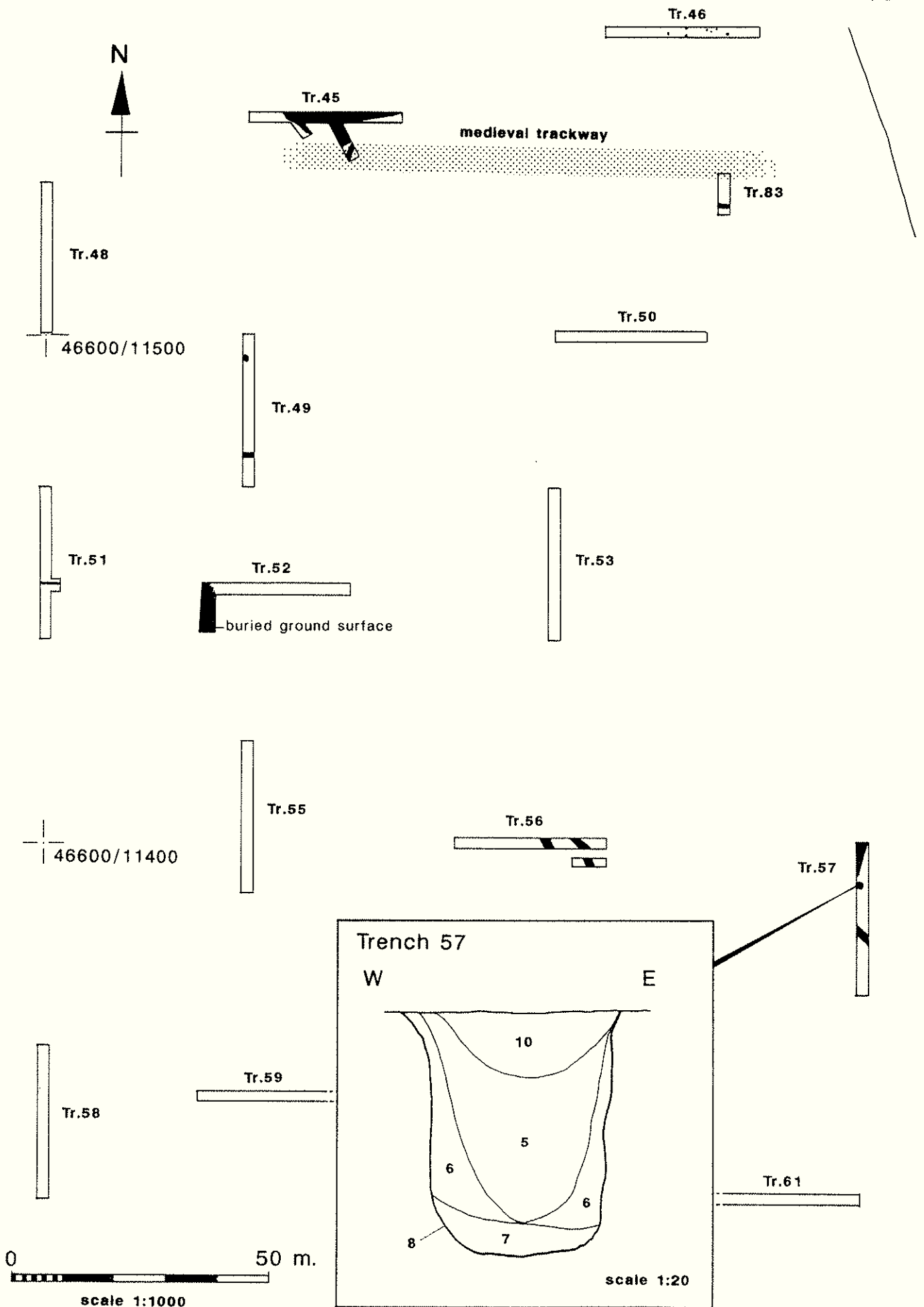


Figure 8: Area 2 Contexts at 1:1000

Trench 45

YCE 93

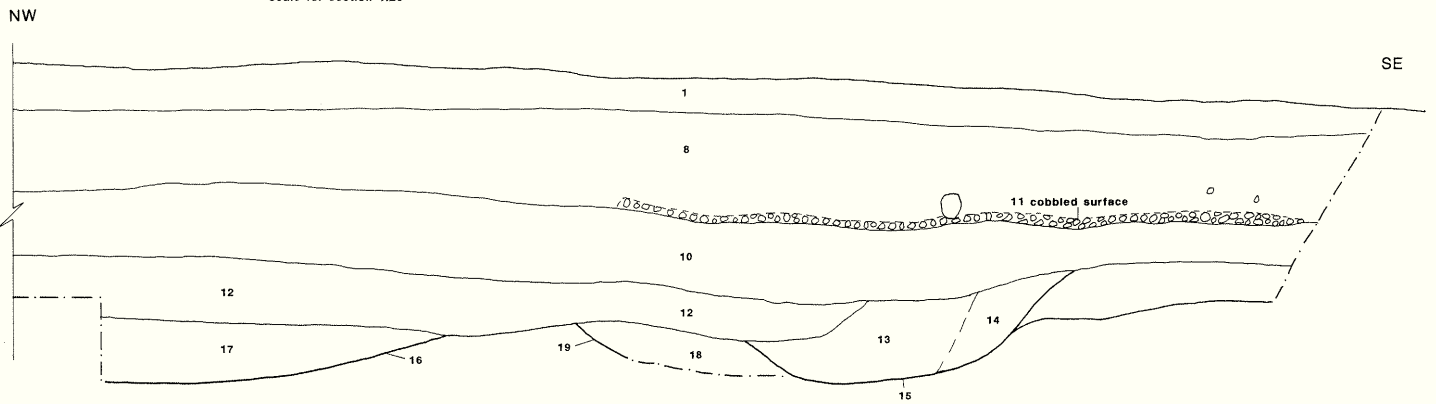
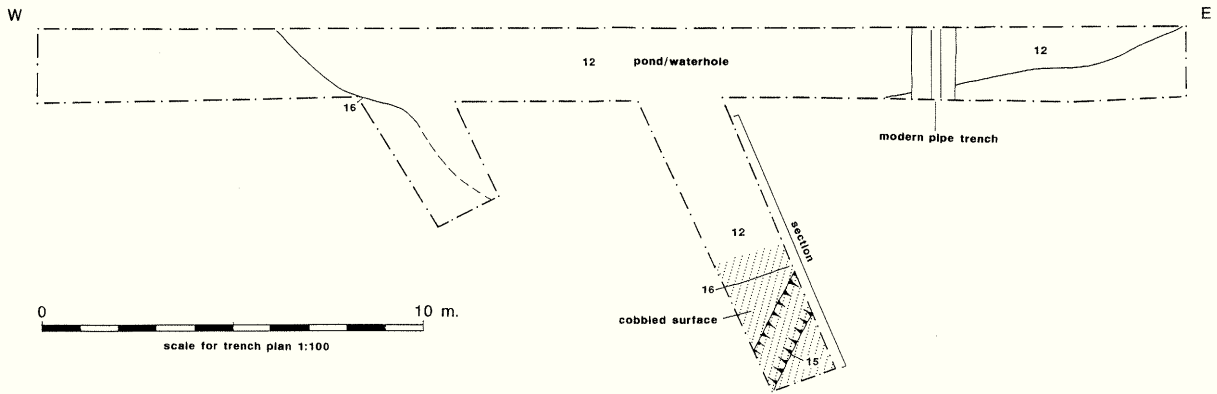
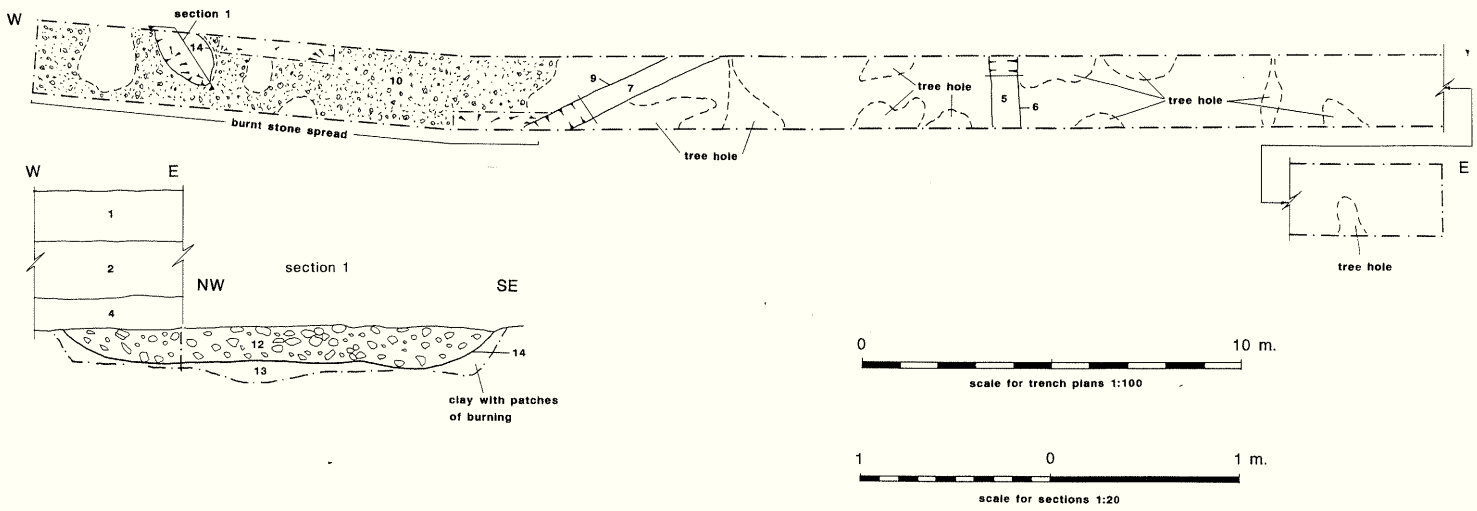


Figure 9: Area 2 Iron Age, Roman and Medieval features (Trench 45)

Trench 70

YCE 93



Trench 179

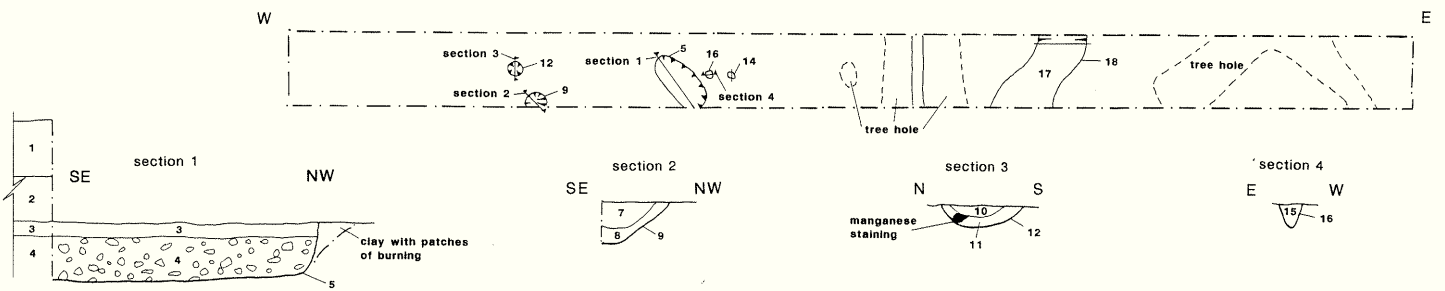
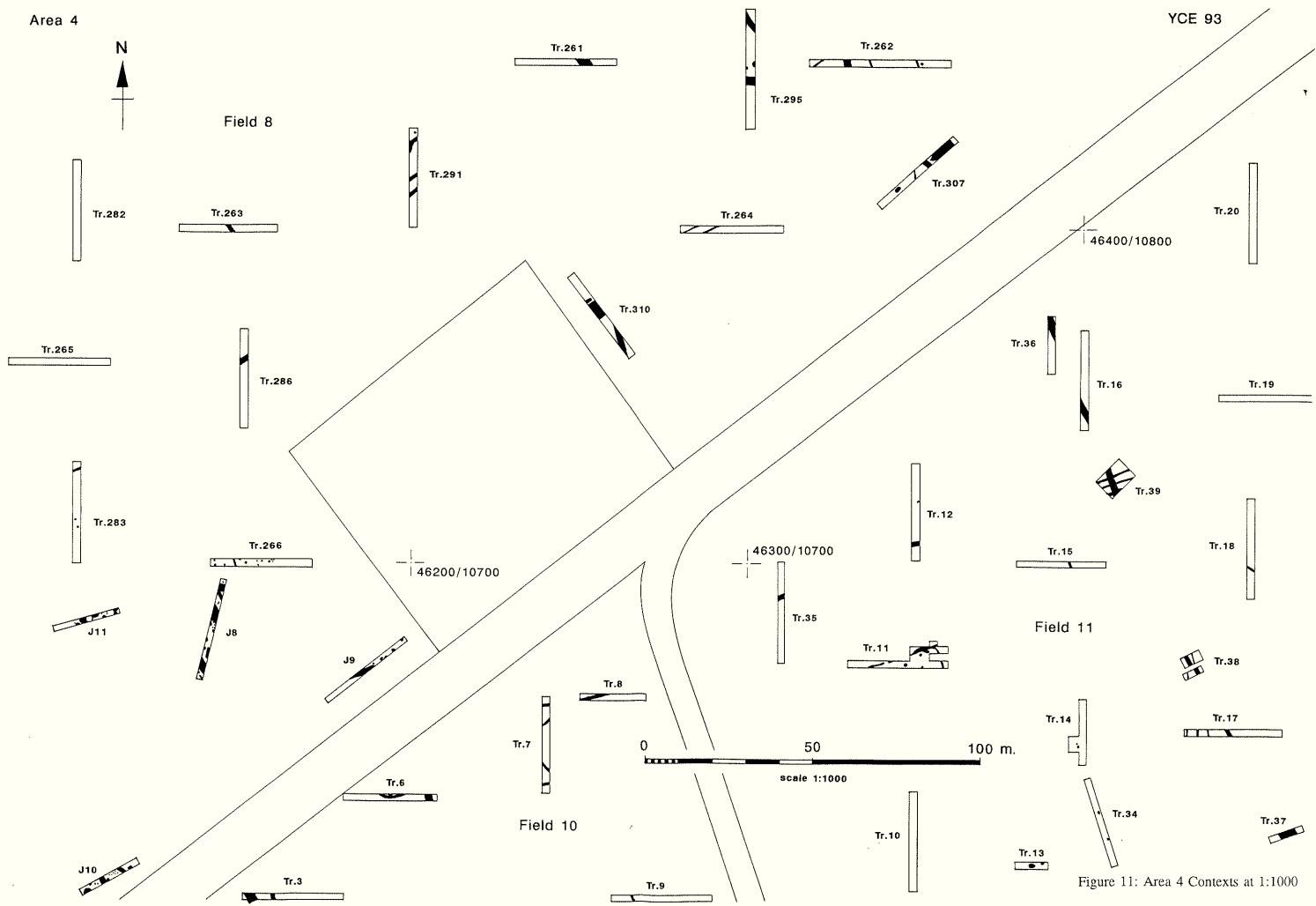
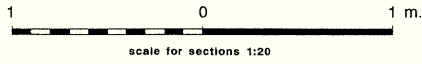
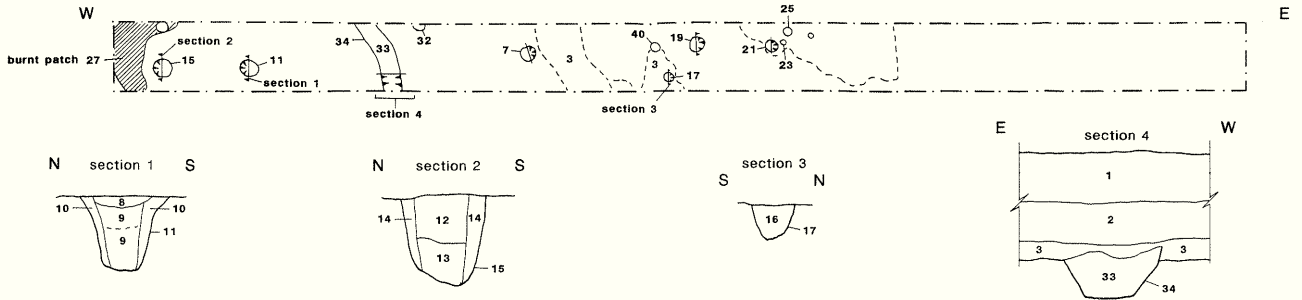


Figure 10: Area 3 & 5 Prehistoric features in Trenches 70 & 179



Trench 266



Trench 11

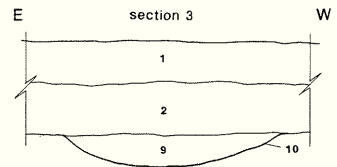
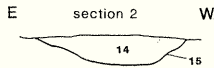
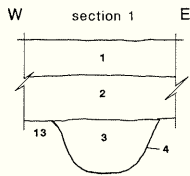
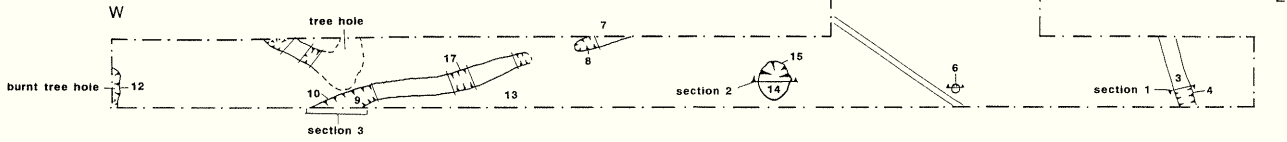


Figure 12: Area 4 Prehistoric features (Trenches 11 and 266)

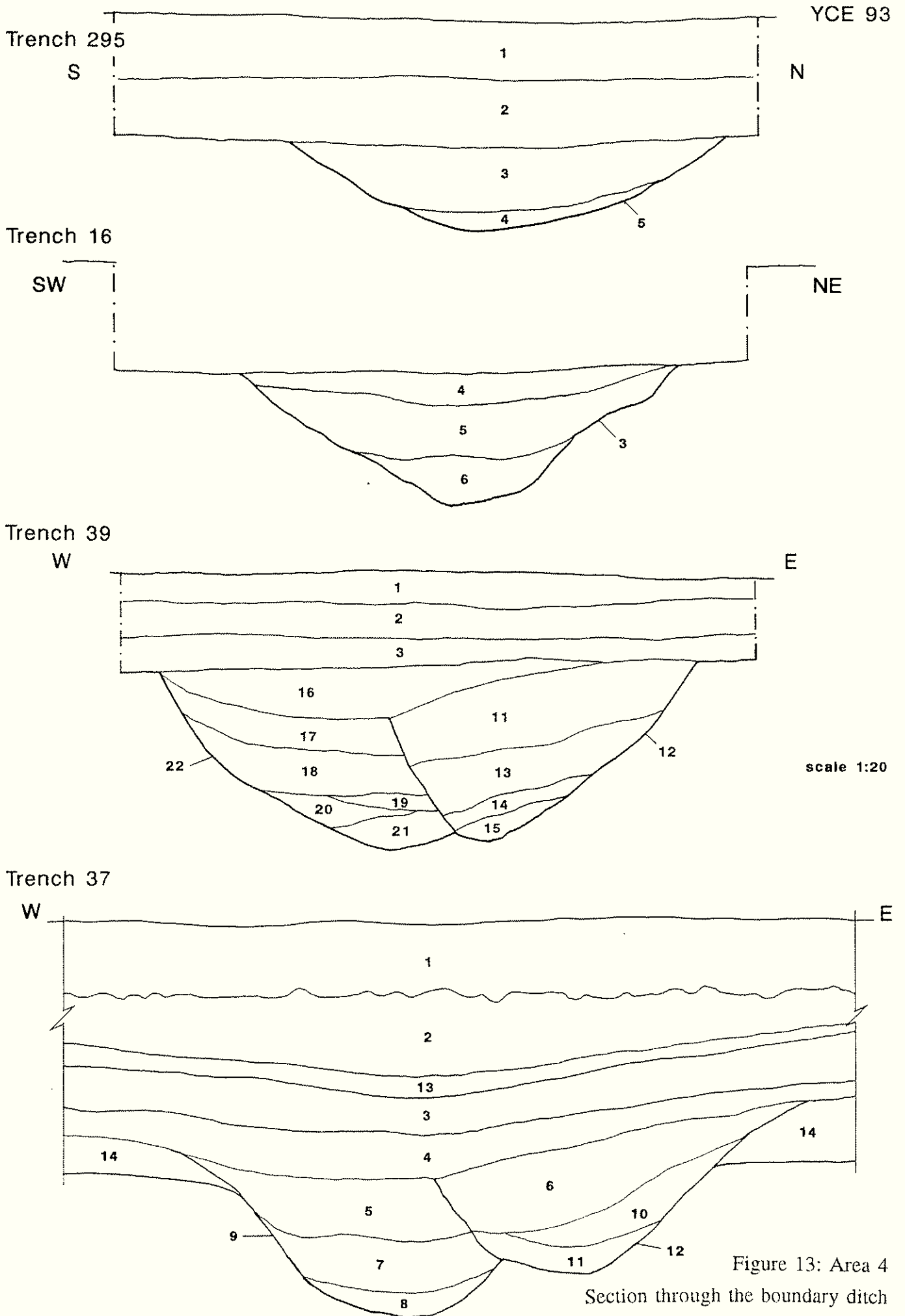


Figure 13: Area 4
Section through the boundary ditch
(Trenches 295, 16, 39 and 37)

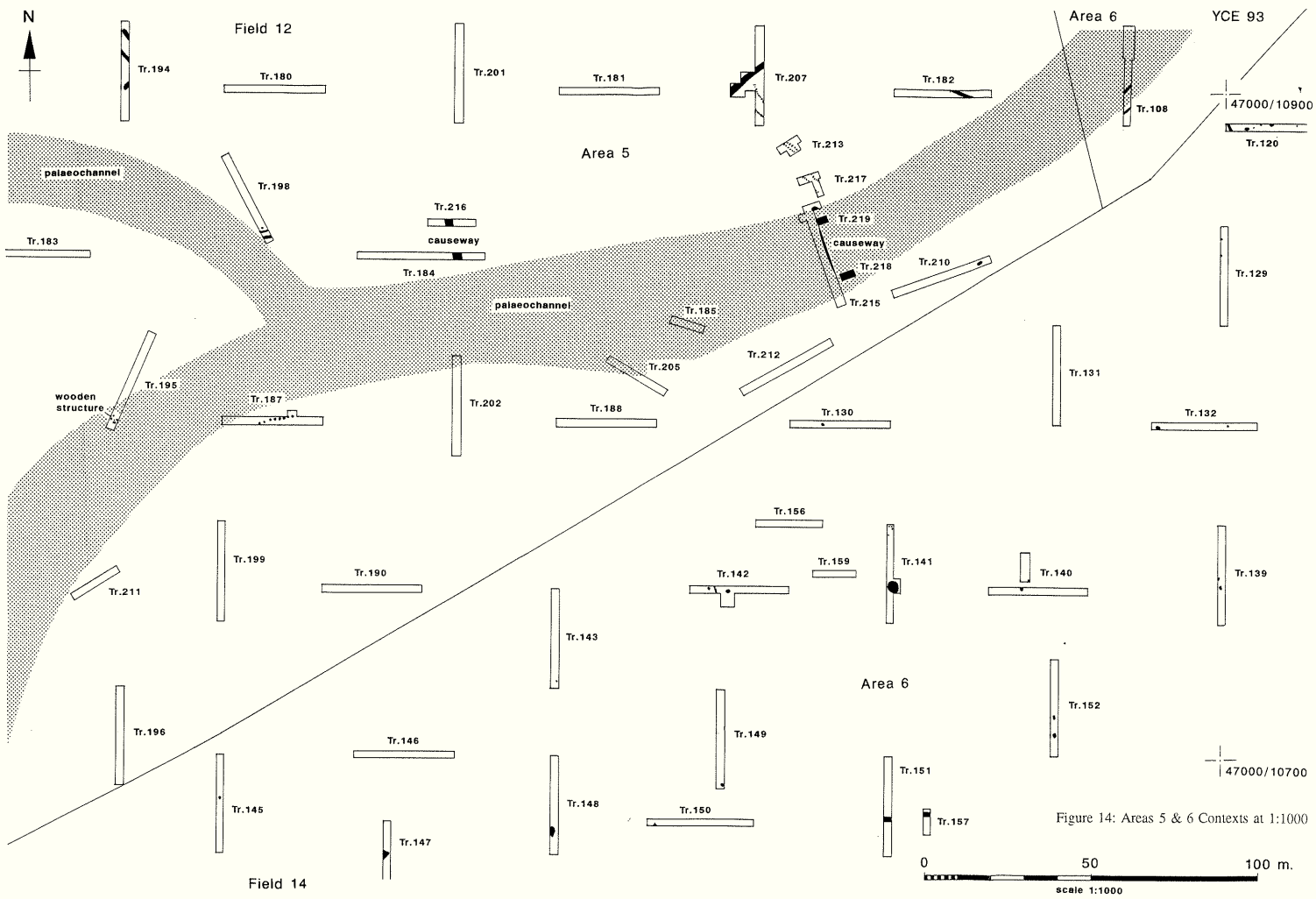


Figure 14: Areas 5 & 6 Contexts at 1:1000

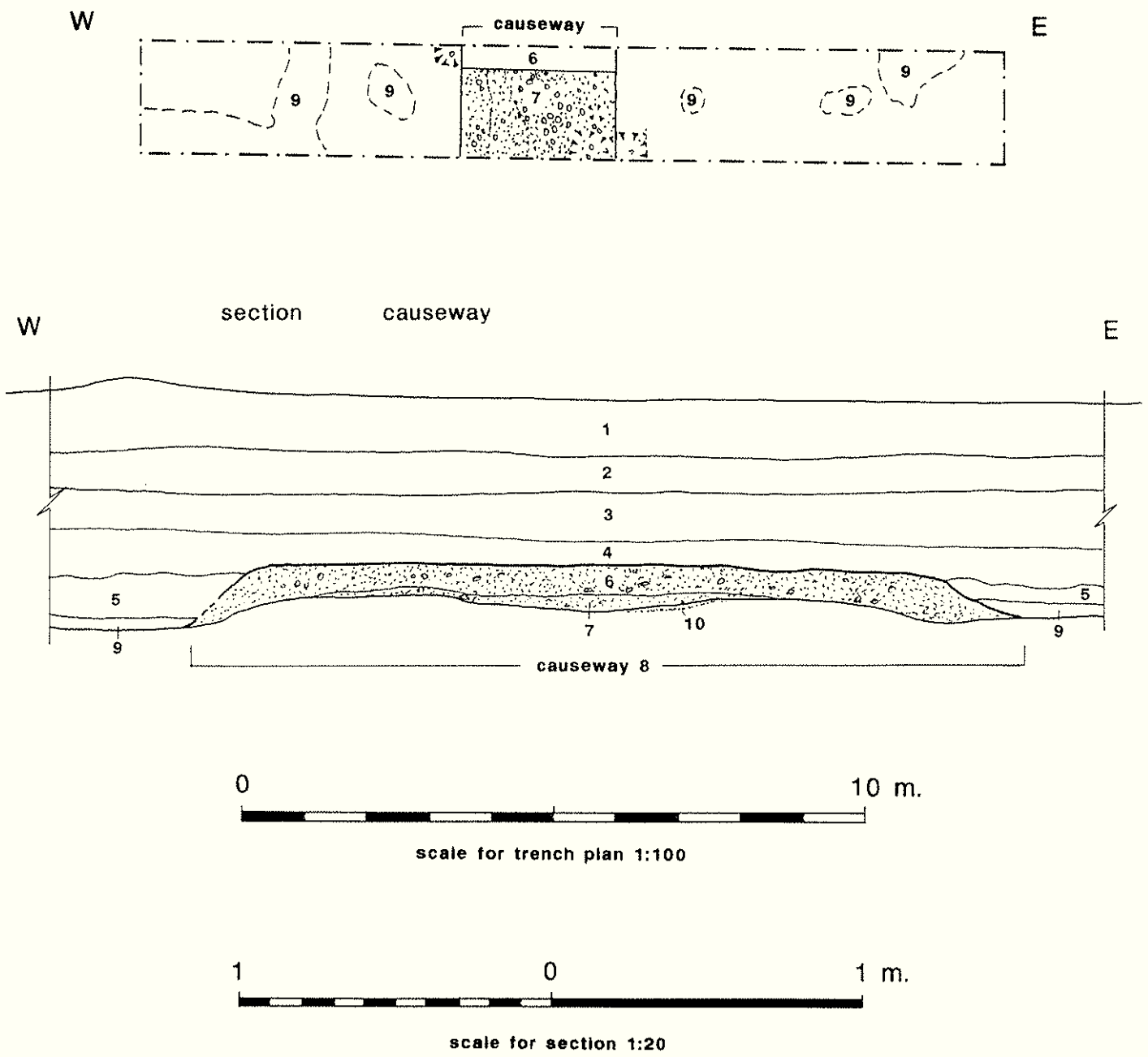


Figure 15: Area 5 Causeway (Trench 216)

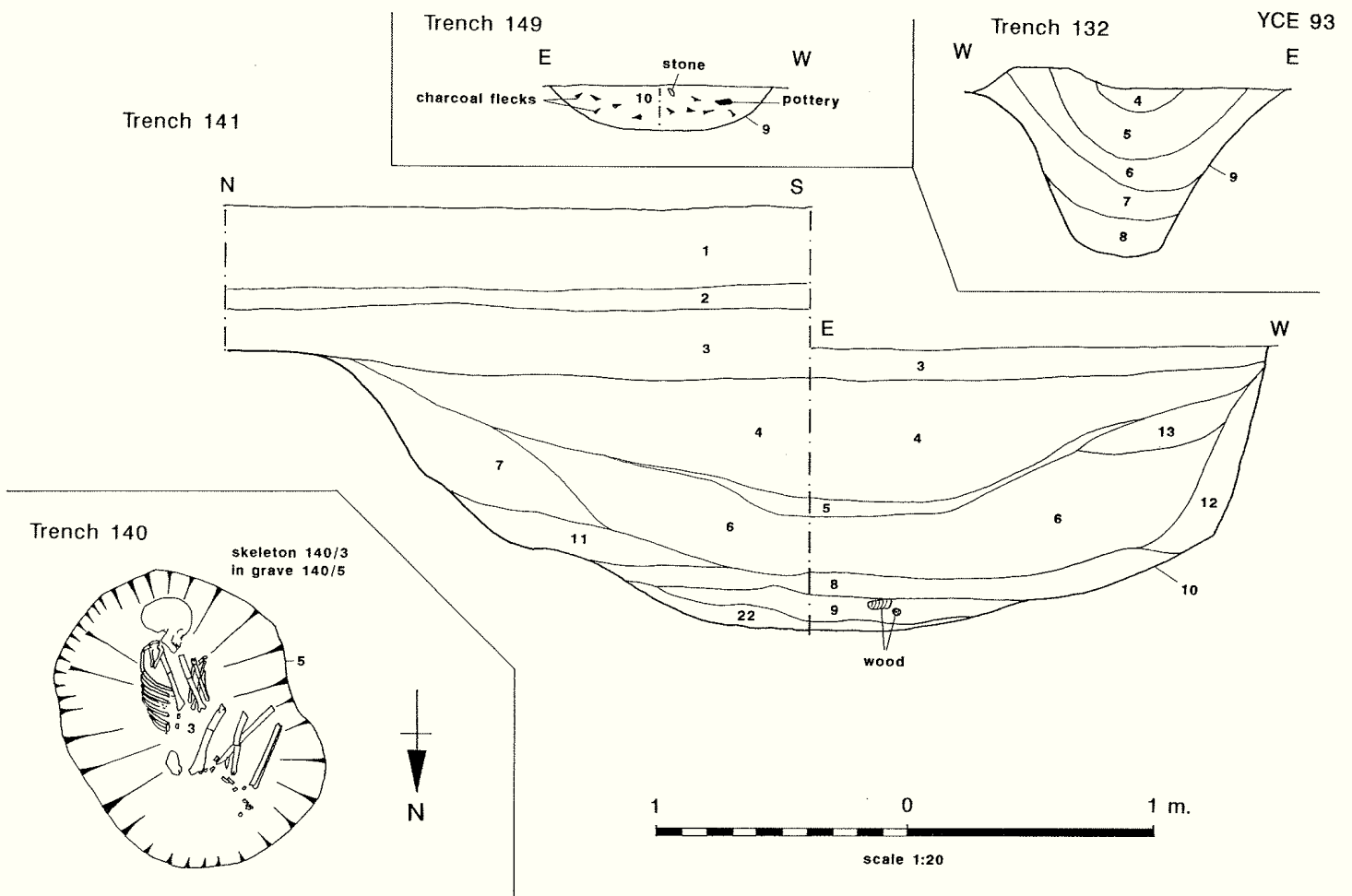


Figure 16: Area 6 Prehistoric features (Trenches 132, 140, 141 and 149)

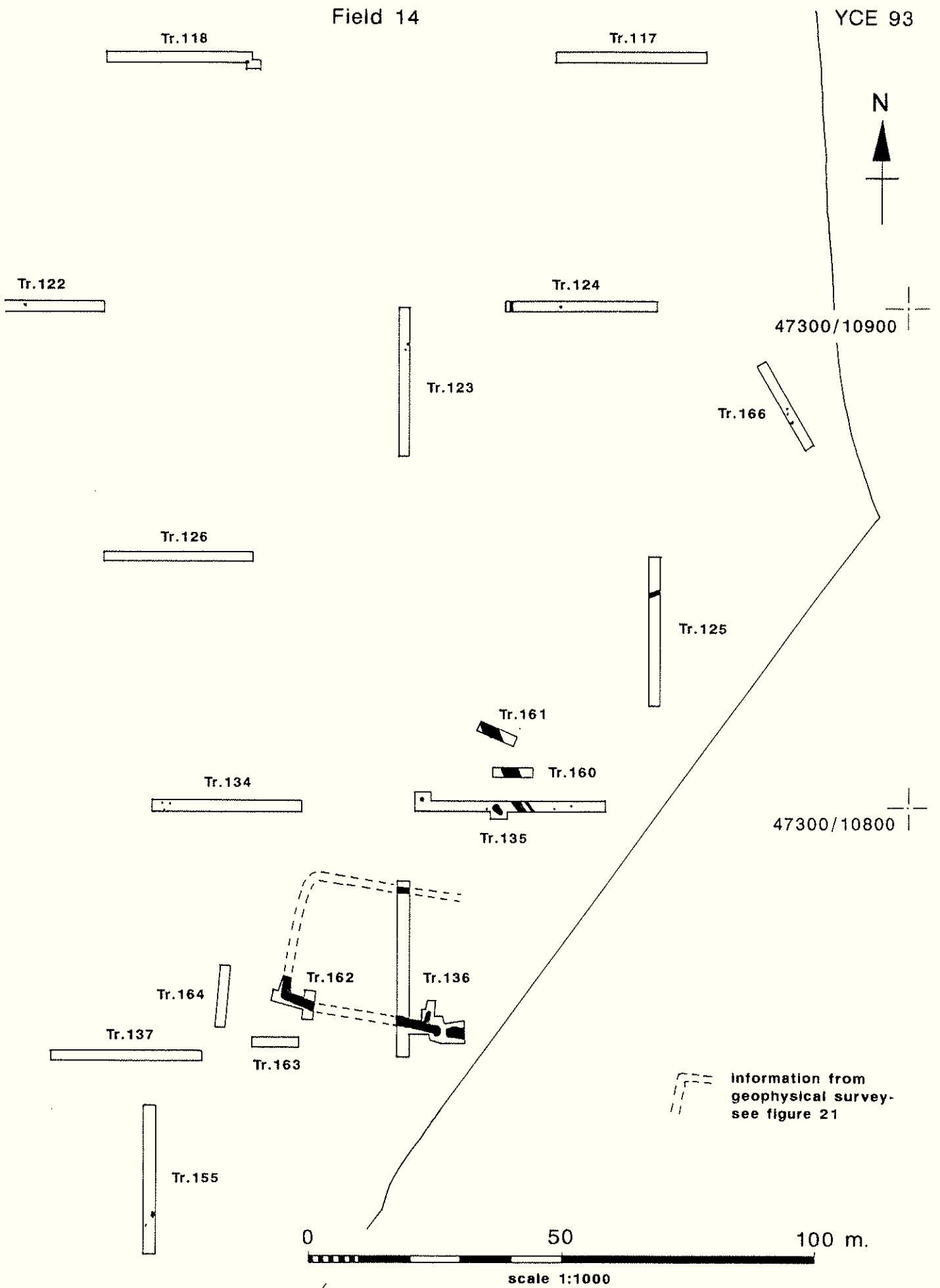


Figure 17: Area 7 Contexts at 1:1000

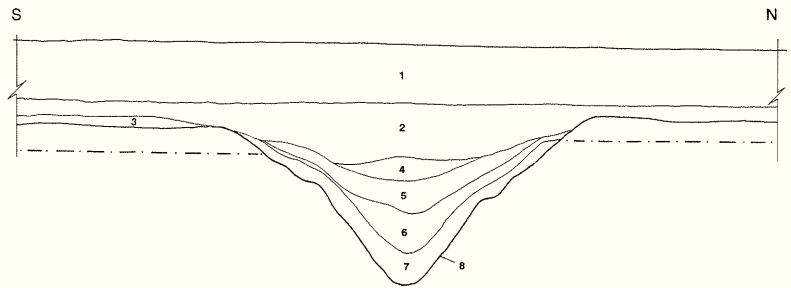
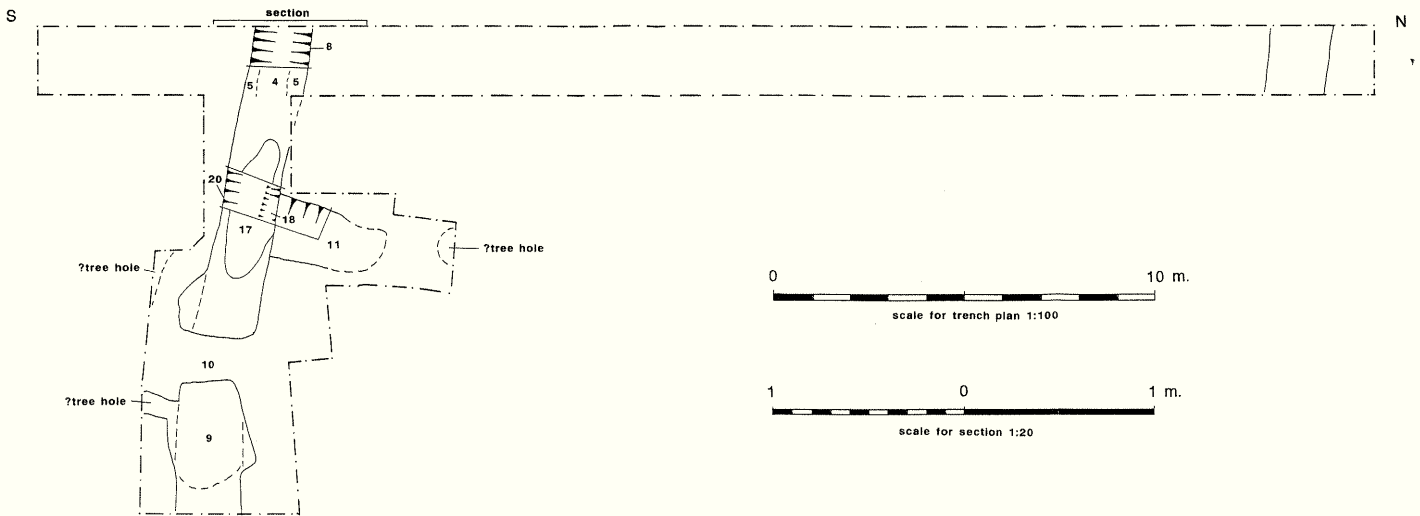
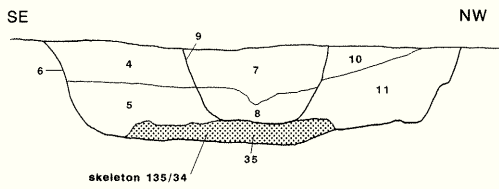
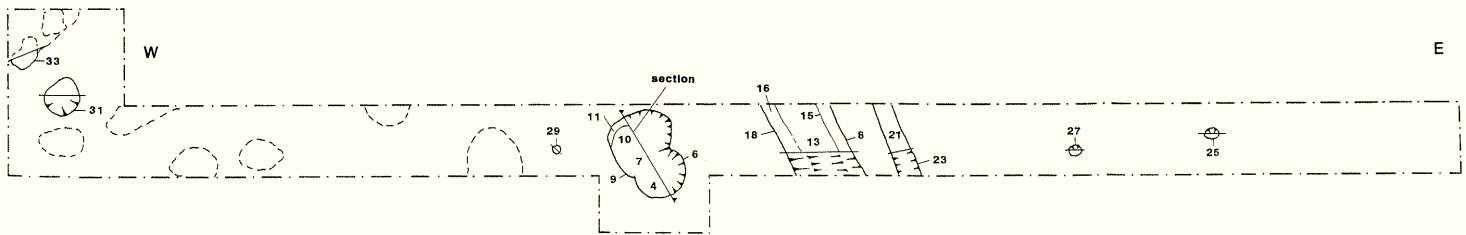


Figure 18: Area 7 The rectangular enclosure



see plates 1 & 2

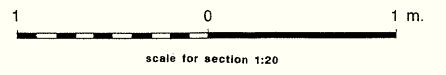
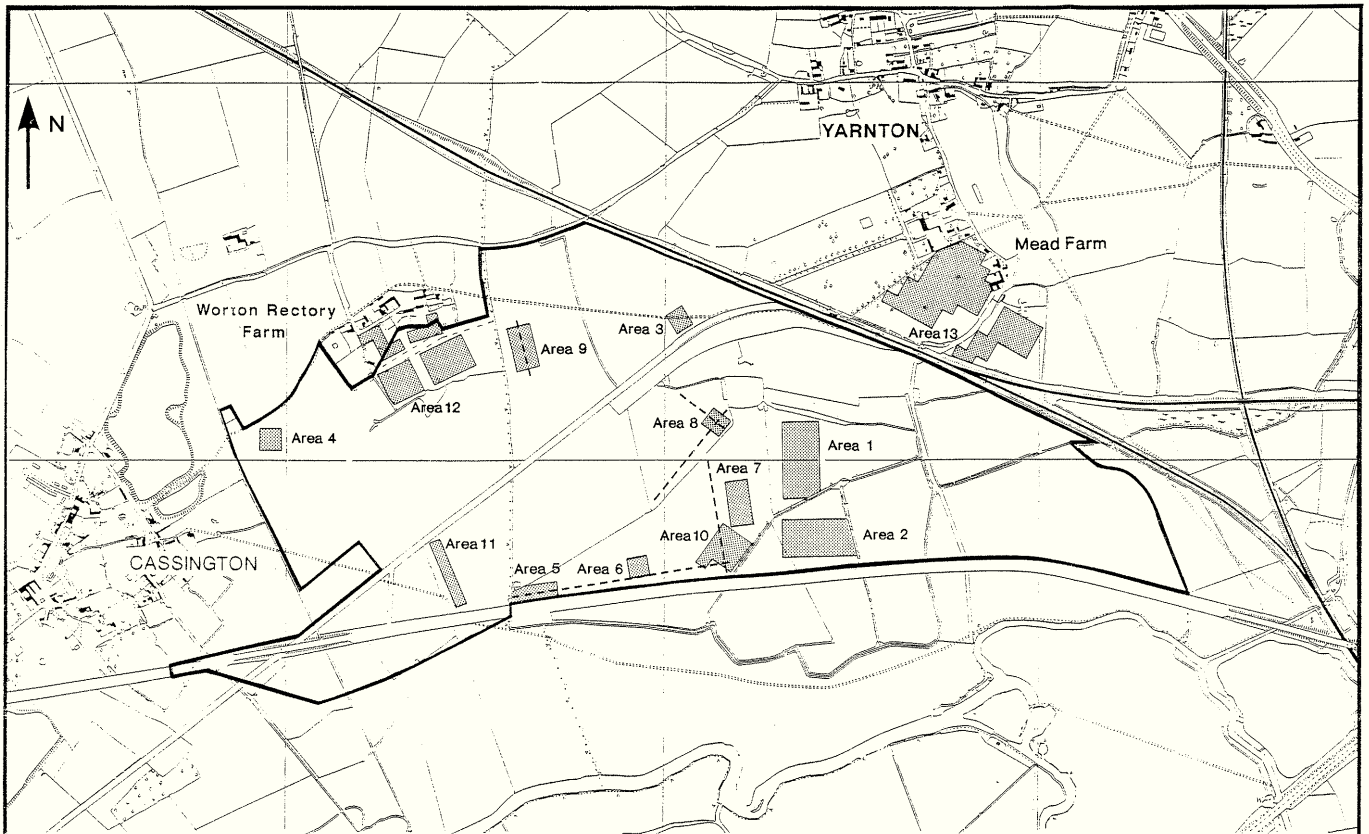


Figure 19: Area 7 Plan & Section of Beaker Grave (Trench 135)



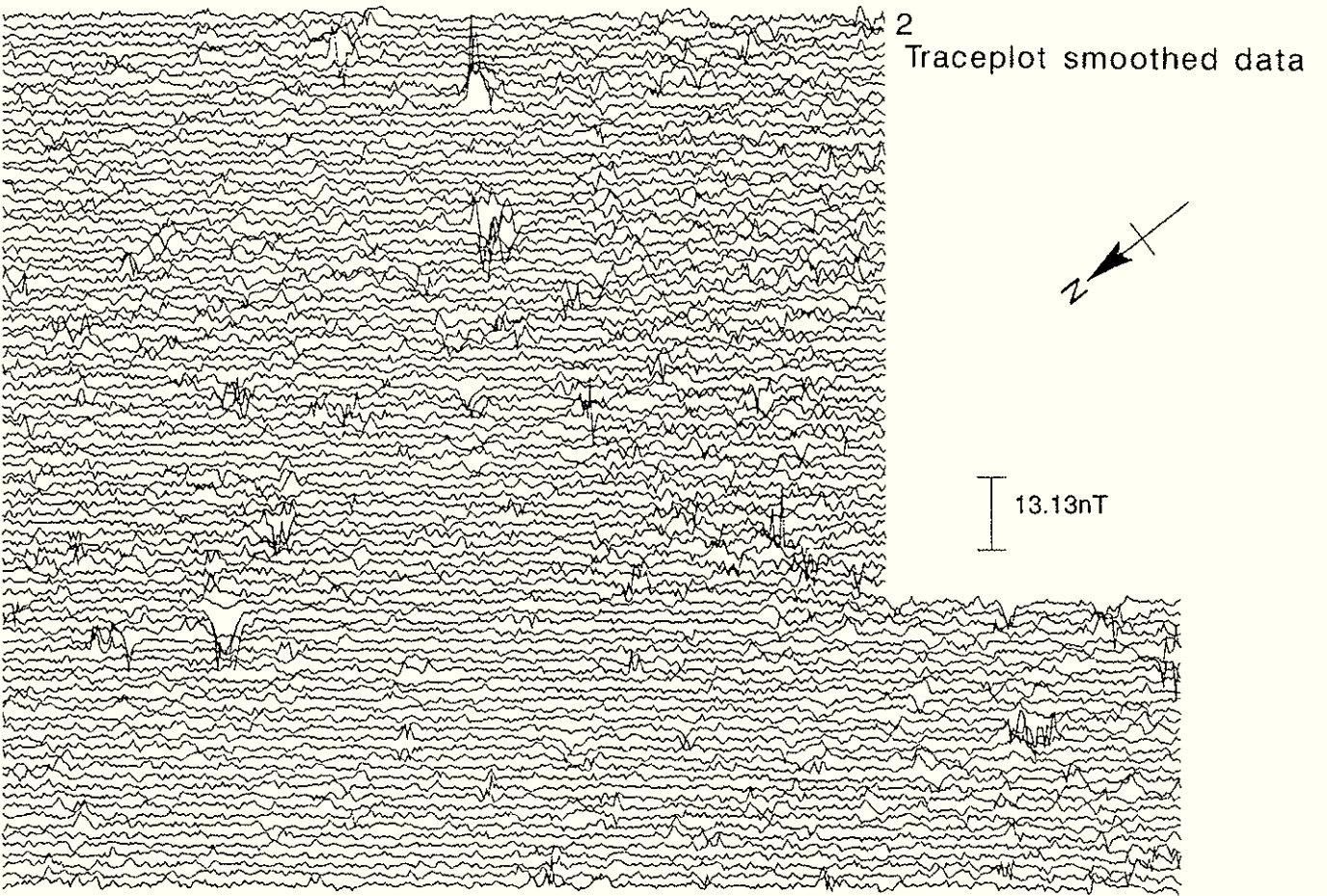
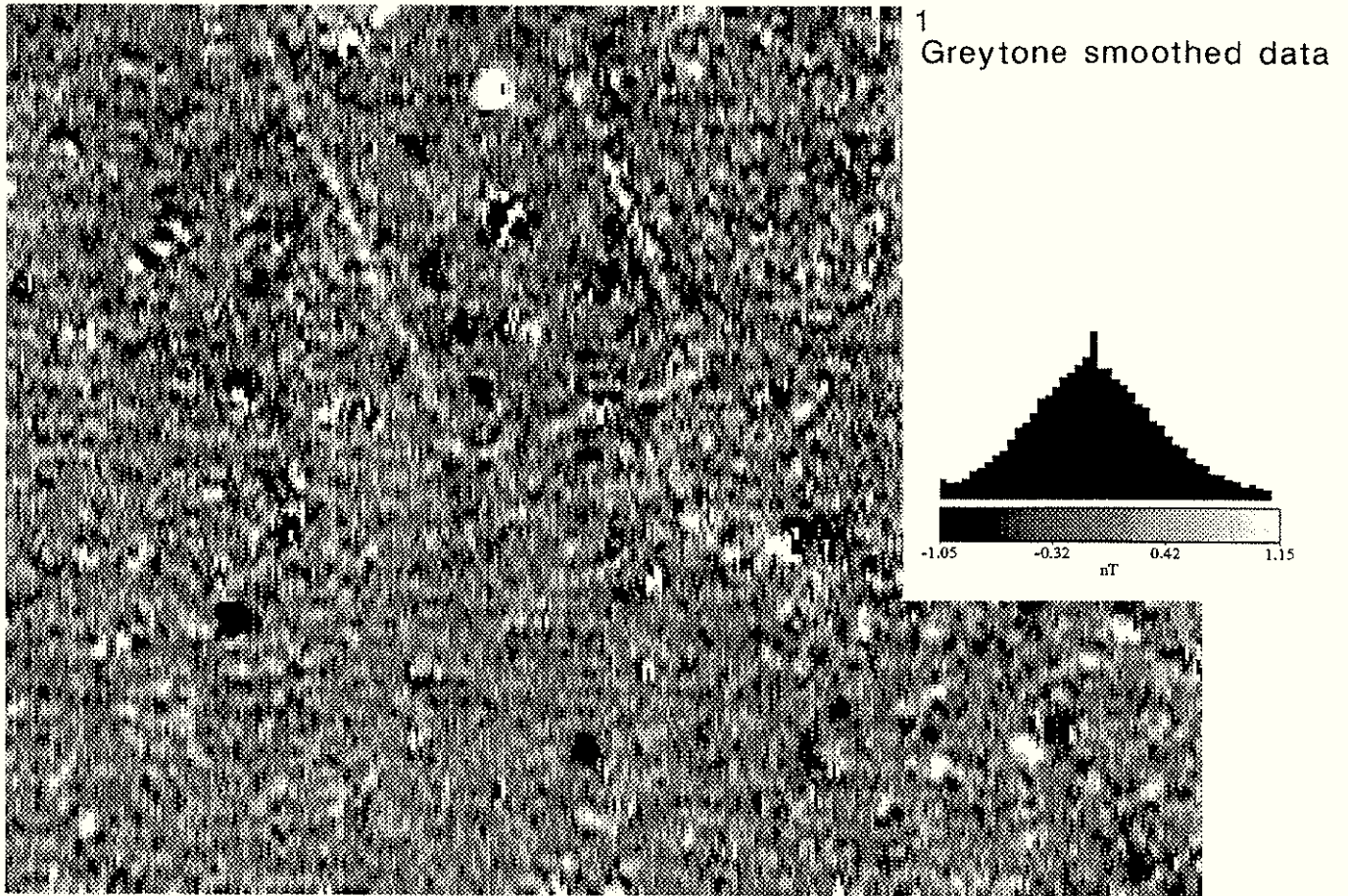
Ancient Monuments Laboratory

Yarnton - Cassington Project

scale 1:10000

- Magnetometer coverage
- - - MS traverses

Figure 20: Location of Geophysical Survey 1992/3



0 60m
1:750

Figure 21: Area 10 Magnetometer survey plot
(Neolithic Rectangular Enclosure)

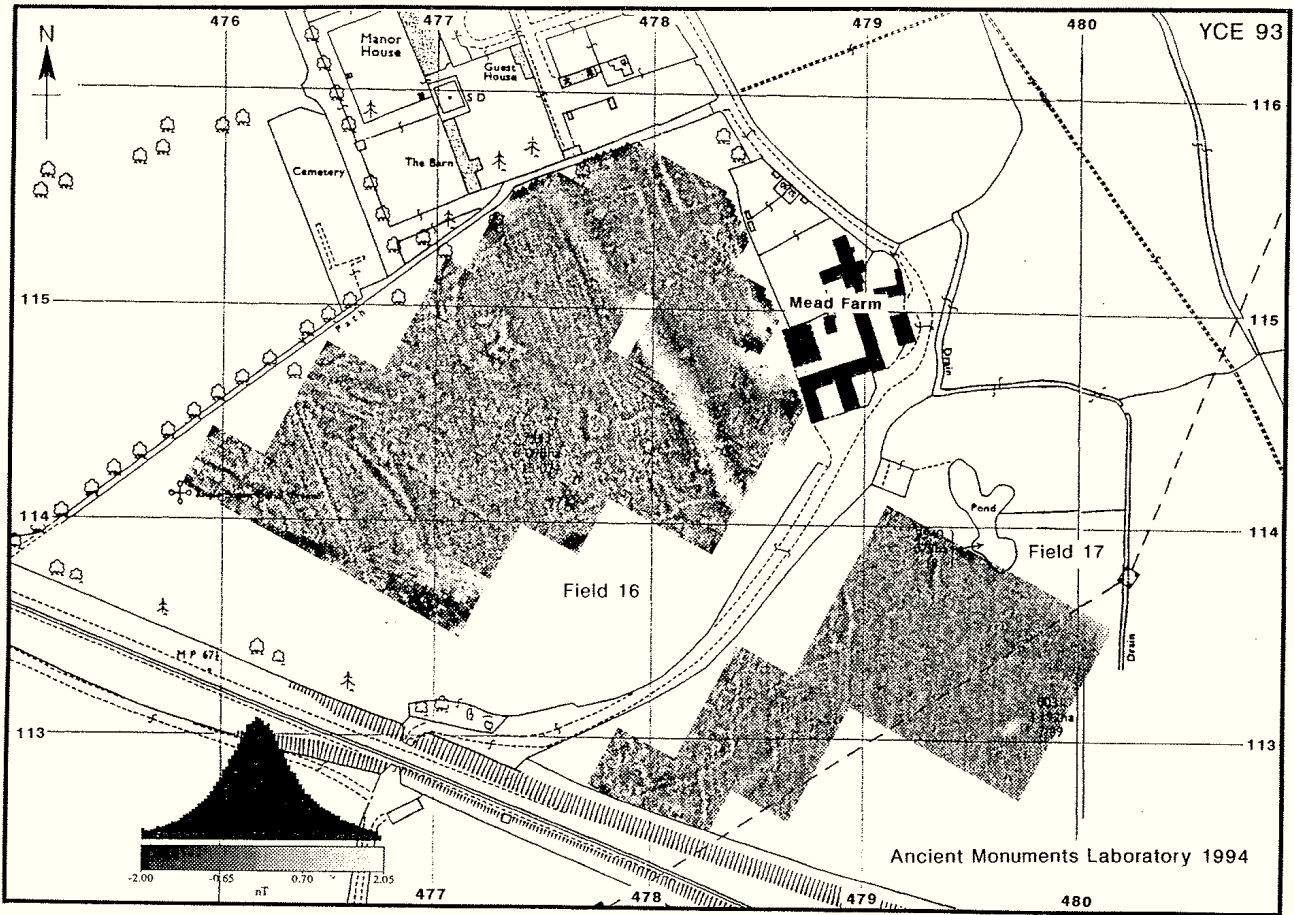
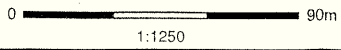
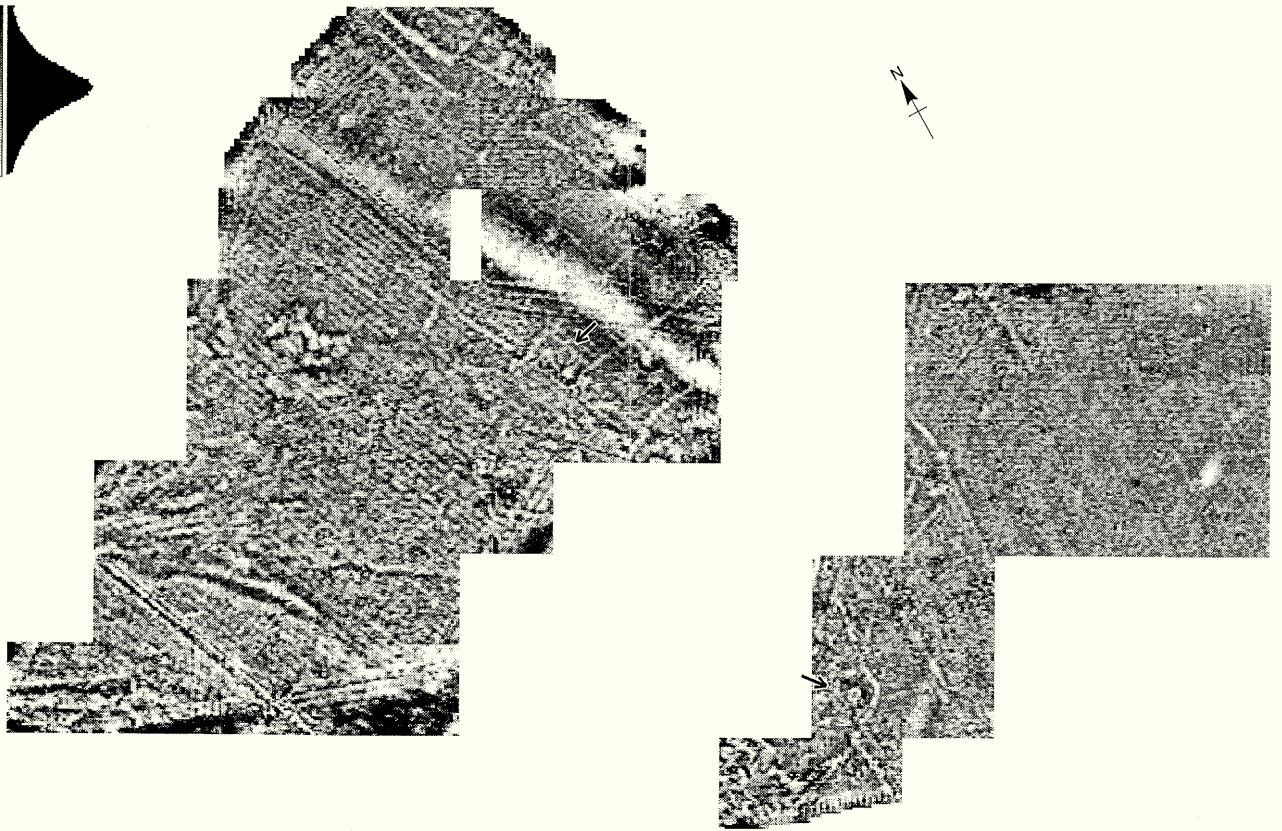
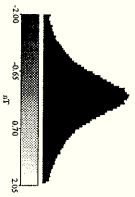


Figure 22: Area 13 Mead Farm, Yarnton. Magnetometer data at 1:2500

Ancient Monuments Laboratory 1994
Mead Farm Yarnton magnetometer data

YCE 93



→ Circular anomalies

Figure 23: Area 13 Mead Farm, Yarnton. Magnetometer survey plot 1:1250

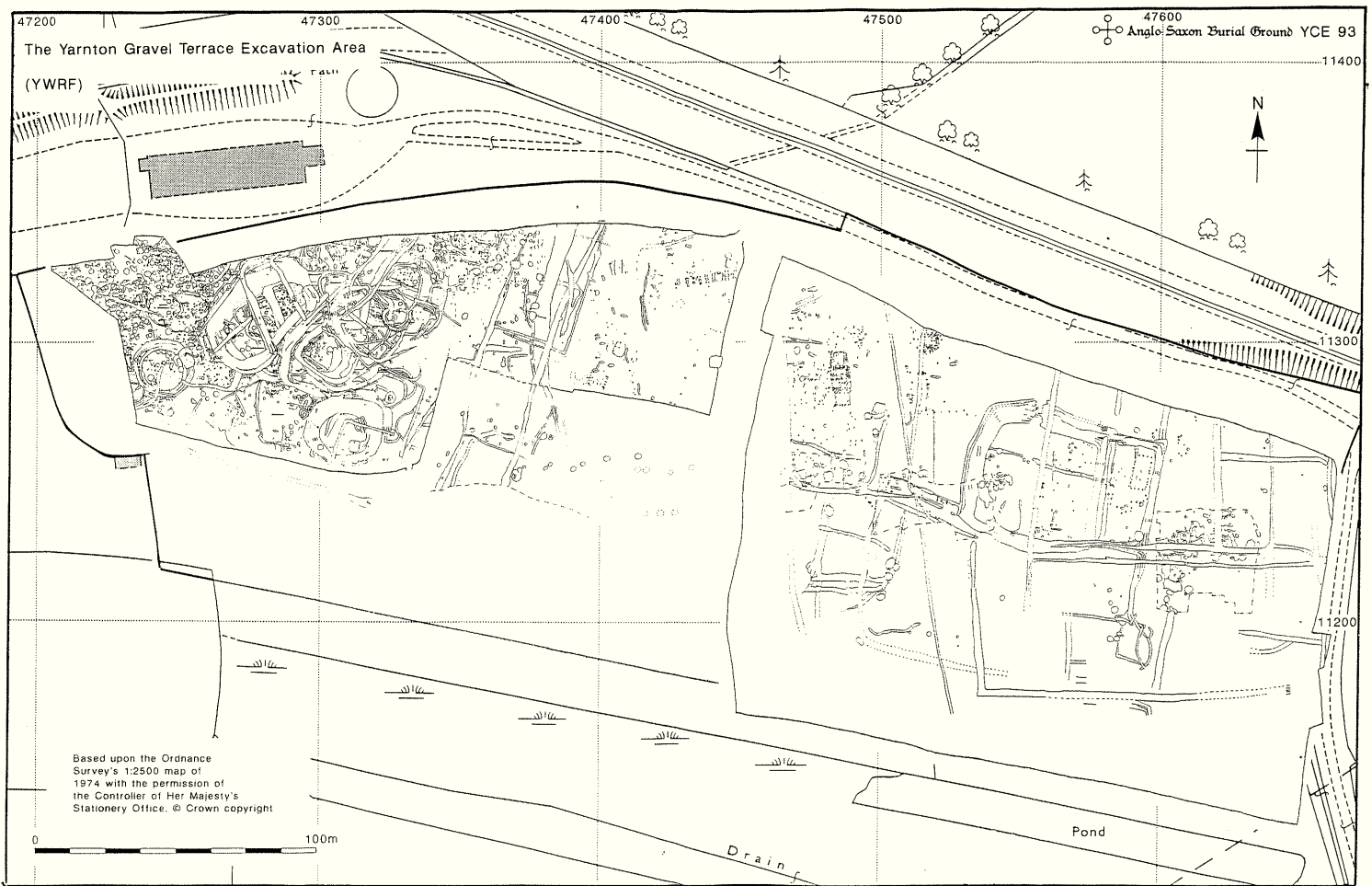


Figure 24: The Yarnton Gravel Terrace Excavation Area

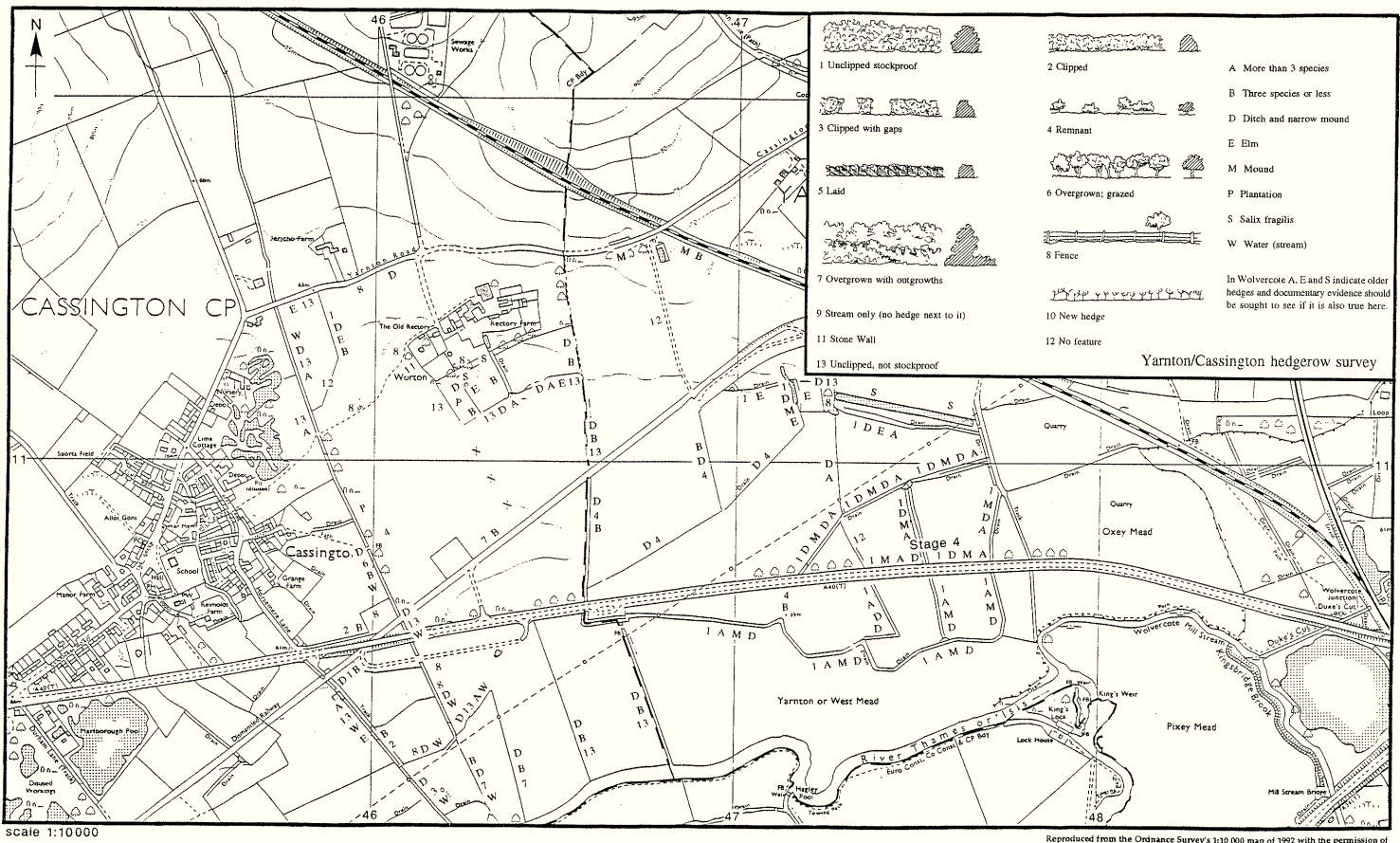


Figure 25: Botanical Survey

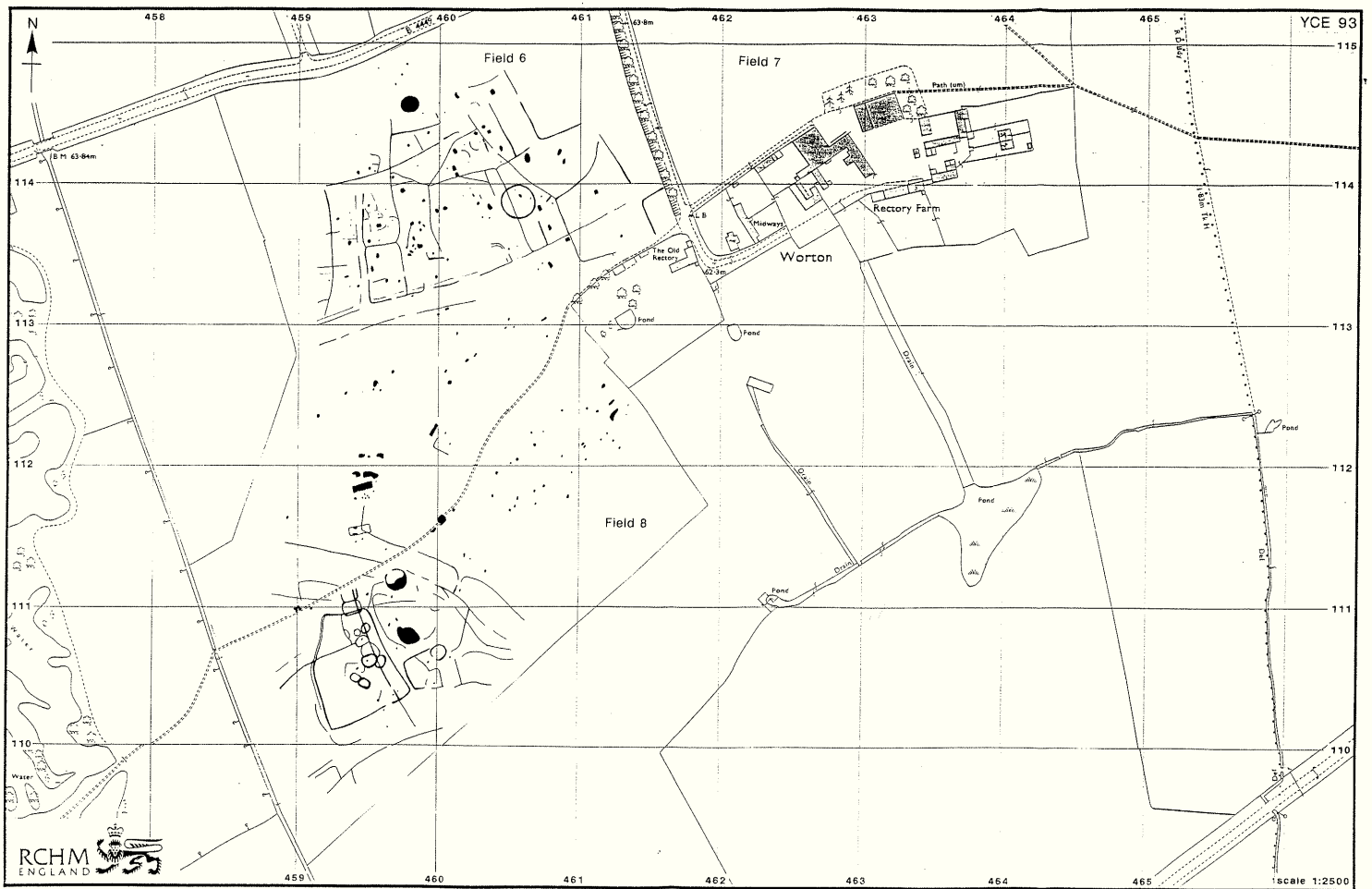


Figure 26: RCHME Cropmark Plot of Worton Rectory Farm

Test-Pit Sieving

N SP 46600/11540

46600/11320 S

	TP 50	TP 51	TP 52		TP 53	TP 54	TP 55	TP 56	TP 57	TP 58	TP 59	TP 60	TP 61
m O.D.	65.41m	64.63m	63.81m		63.21m	62.43m	61.87m	61.29m	60.89m	60.59m	60.29m	60.17m	60.16m
LAYER 1	1/1	G S ⁴	⊙ ⊙ B Fe S ¹⁰		● Fe S	⊙ Cp S ⁵ C	G S ¹⁰ C	⊙ ● Fe GS ¹¹		S ⁶	Bu ³ S ⁵	● S ³	▲ S ²⁵
MODERN PLOUGHSOIL	1/2	■ B S C ¹³	⊙ ▲ S ⁹		B S ²	S ¹⁰	S	● Cp S ⁸ C	S	⊙ S ⁶		■ S ²⁰	S ¹⁰
	1/3	S ⁷	⊙ S ³		Fe S	⊙ Bu S ^{2 10} C		● GS	G	G Bu S ² S ⁹		● S ²	⊙ GS ⁴ C
LAYER 2	2/1	Fe				⊙ GS				⊙			SC
PLOUGHSOIL	2/2		●	COLLUVIUM				●			●	⊙	● Fe S ²
	2/3	● Ch										▲ ³	
LAYER 3	3/1	FEATURE											
	3/2							S					
	3/3			EARLY PLOUGH SOIL								■ Fc Bu ^{2 2}	⊙ ⁶

N SP 46600/11300

46605/10760 S

	TP 62	TP 63	TP 64	TP 65	TP 66	TP 67	TP 69	TP 70		TP 74	TP 76	TP 77
m O.D.	60.13m	60.09m	60.09m	59.85m	59.89m	59.31m	59.30m	59.35m		59.35m	59.36m	59.35m
LAYER 1	1/1	● S ¹⁰ P	S ¹¹	▲ S ¹²	⊙ S	S ⁴	Fc S ⁸ C	Fc S ⁷	G S ¹⁰ Ch	G Fc ²⁰	⊙	
MODERN PLOUGHSOIL	1/2	● G S ⁶	● S ⁸	B S ⁶	S ⁸	● ■ Fc S ⁶ C	Fc Fc Bu S ¹⁵	Bu S ¹² C	S ⁶	Fc G S ¹⁰ Ch	S ²	
	1/3	Bu S ³ C ³	● ■ Bu S ⁵			B Fc S ⁶ C					⊙ Bb ² S C	
LAYER 2	2/1	● ²	● ■ ²	● ■	▲ Bu S	Fe Bu S ⁵		S ⁹	G			
COLLUVIUM UPPER (LOOSE)	2/2	⊙ ²	■			B	▲			PALAEOCHANNEL		
	2/3	⊙ ²										
LAYER 3 LOWER (MORE COMPACT)	3/1	● ■ ² Fe	●	▲ ²			COLLUVIUM			PALAEOCHANNEL	■ Misc ⁴	
	3/2	⊙	⊙ ■ ⁵	■								
LAYER 4 LOWER PLOUGHSOIL	4/1	▲	■	▲			TRAMPLE	⊙		PALAEOCHANNEL	■ ⁴	
	4/2										▲ ²	

- | | | |
|------------------------------------|----------------|------------------------------|
| ● Late Neolithic/ Early Bronze Age | ▲ Flint | S Slag |
| ⊙ Late Bronze Age/ Iron Age | ■ Burnt stone | C Coal |
| ● Roman | B Bone | Ch Charcoal |
| ● Medieval | Bb Burnt bone | P Plastic |
| ⊙ Post-Medieval | G Glass | Cp Clay pipe |
| ● Uncertain | Fe Iron object | Bu Ceramic building material |
| Layer absent | Fc Fired clay | Sl Slate |

Misc Stone jewellery setting

Figure 27: Test-pit sieving

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