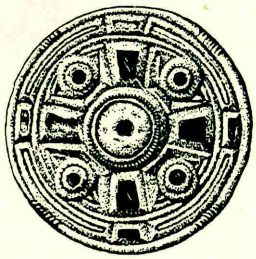

Archaeological Field Unit

EVALUATION OF IRON AGE, ROMAN AND SAXON ARCHAEOLOGY AT THE PROPOSED WELLCOME TRUST GENOME CAMPUS EXTENSION, HINXTON HALL, HINXTON, CAMBRIDGESHIRE. TL500433

S. Kemp and P. Spoerry

1998

Cambridgeshire County Council

Report No. 149

Commissioned By Fuller Peiser on behalf of the Wellcome Trust

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Illustrations by Jon Cane

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Summary

Evaluation trenching was carried out in January and February 1998 on the site of the proposed Wellcome Trust Genome Campus Extension, Hinxton Hall, Hinxton, Cambridgeshire. Archaeological field evaluation confirmed the survival of archaeological features, many of which had previously been identified from cropmarks and geophysical survey data. The evaluation showed that these remains mostly date from the late Iron Age through to the late Saxon periods.

The earliest archaeology present within the development area consists of a general background scatter of Neolithic, Bronze Age and Iron Age flint work which lies within the topsoil or later archaeological features. The earliest identified cut features are of late Iron Age date, representing a small farmstead comprising post built structures, pits, boundaries, midden deposits infilling ditches, and enclosures. Early Romano-British archaeology continues the Iron Age land use pattern, although at a later date in this period pitting and quarrying for the extraction of sands and gravels occurs along the riverside. Land to the east appears to continue as a zone of agricultural activity.

During the late Saxon, and possibly earlier, a discrete zone of pitting occurs along the riverside within the smaller of the Iron Age enclosures. Trackways from the Saxon settlement at Hinxton Hall link the two activity areas.

The evaluation has helped to identify important elements of the Iron Age, Roman and Saxon landscapes which, if studied in greater detail, will help us to understand the activity zones, their inter-relationships and their temporal and spatial transformations.

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by Jon Cane

1 INTRODUCTION

The Archaeological Field Unit, Cambridgeshire County Council (AFU) was commissioned to report on the condition of archaeological remains in the area of the proposed Wellcome Trust Genome Campus Extension, Hinxton Hall, Hinxton, Cambridgeshire which lies to the south of the present Wellcome Trust Genome Complex. The archaeological field evaluation reported within this document was preceded by a desk-top assessment prepared by Stephanie Leith and Dr. Paul Spoerry (1997) which outlined the archaeology of the area. This archaeological work continues the AFU's long standing research into the Anglo-Saxon settlement and environs at Hinxton Hall.

Between the 26th of January and the 20th February 1998 archaeological field evaluation consisting of machine cut trenches and hand excavation was carried out by personnel of the AFU. The evaluation was undertaken in line with the specification for works prepared by Dr Paul Spoerry and verified by Louise Austin of the County Archaeology Office. Monitoring of the Archaeological work on behalf of the County and District Councils was undertaken by the County Archaeology Office.

The proposed development area lies at TL 500433 immediately to the south of the Genome research centre at Hinxton Hall (Figures 1 & 2). The eastern side of the site is bounded by the A130 whilst on the west lies the River Cam and to the south the A11. An area set aside for lakes and landscaping lies on the western side of the Cam within the parish of Ickleton. The total development area covers about 28 hectares.

2 GEOLOGY AND TOPOGRAPHY

The land on the eastern side of the river Cam slopes from 40m OD next to the A1301 to about 30m by the river and is marked by a series of gravel terraces, whilst the land to the west is largely flat lying at about 30m OD. Presently both areas are used for arable agriculture (Leith and Spoerry 1997).

The higher land is marked by chalk geology, whilst first and second terrace gravels lie along the course of the Cam. Close to the river alluvial sediments were encountered during excavation works in advance of the pipe laying for the Great Chesterford New Main (Roberts 1996).

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The AFU has been involved in the specific study of the archaeology along the course of the Cam within the Parish of Hinxton since 1990. The majority of this work has centred on the Genome Research Centre and the New Lakes which lie to the west and south-west of Hinxton Hall.

These latter evaluations and excavations revealed Neolithic and early Bronze Age activity within the Hall grounds which included farming and quarrying interpreted from the presence of field boundaries and pits. In addition a late Neolithic 'shaft' of 1.80m in depth was cut into the chalk. Late Neolithic/early Bronze Age flooding is evidenced by the presence of water borne silts covering many of these early Neolithic features and has been preserved within features and natural hollows within the site (Spoerry 1995). No Iron Age remains were encountered at the research centre or during excavations associated with the construction of the New Lakes.

Roman remains proved to be sparse during excavations at the research centre although the occasional traces of activities representing quarrying and possibly rubbish disposal were found. No traces of field systems were encountered even though the site lies only 2km from the Roman town of Great Chesterford (Spoerry 1995). To the west, however, complex Romano-British remains of 3rd to 4th century date were found during archaeological excavations at the New Lakes site (Figure 1, showing the location of most of these pieces of work in the area around the proposal site). Two enclosures associated with field systems were identified and in addition the ground plan of a timber building, probably of early-middle Saxon date, was recorded. The Roman artefacts associated with this site indicated an agricultural rather than settlement related use (Leith 1995).

Excavations by the Cambridge Archaeology Unit indicate that Roman field systems continue along the river gravel terraces of the Cam and that an extensive agricultural network had developed adjacent to Great Chesterford. This work also identified the presence of a 1st century BC cremation cemetery (Alexander and Hill 1996)

The timber framed building mentioned above lies close to early-middle Saxon sunken featured buildings (*grubenhauser*) excavated in 1994 as part of the excavations associated with the Genome research centre development. A group of at least four *grubenhauser* and a number of post-built 'halls' indicate a small dispersed settlement existed on the site during the early to middle Saxon period. Domestic disposal in pits appears to have occurred close by (Spoerry 1995).

The late Saxon occupation of the site appears to have occurred between the ninth and early twelfth centuries. During this period the occupation area was enclosed, although the ditch system appears to have been complex, forming part of a series of rectilinear closes or fields adjacent to the settlement. Successive generations of beam slot and post built buildings are represented in the enclosure and indicate at least one phase of settlement reorganisation and re-alignment. Ovens, wells and rubbish pits have been identified.

Outside of the main late Saxon enclosure at least one large building of sill beam construction with corner posts has been identified, this has been interpreted as a barn. The relative absence of rubbish pits and artefactual material compared to the main enclosure is thought to indicate an area of agricultural processing as opposed to occupation (Spoerry 1995).

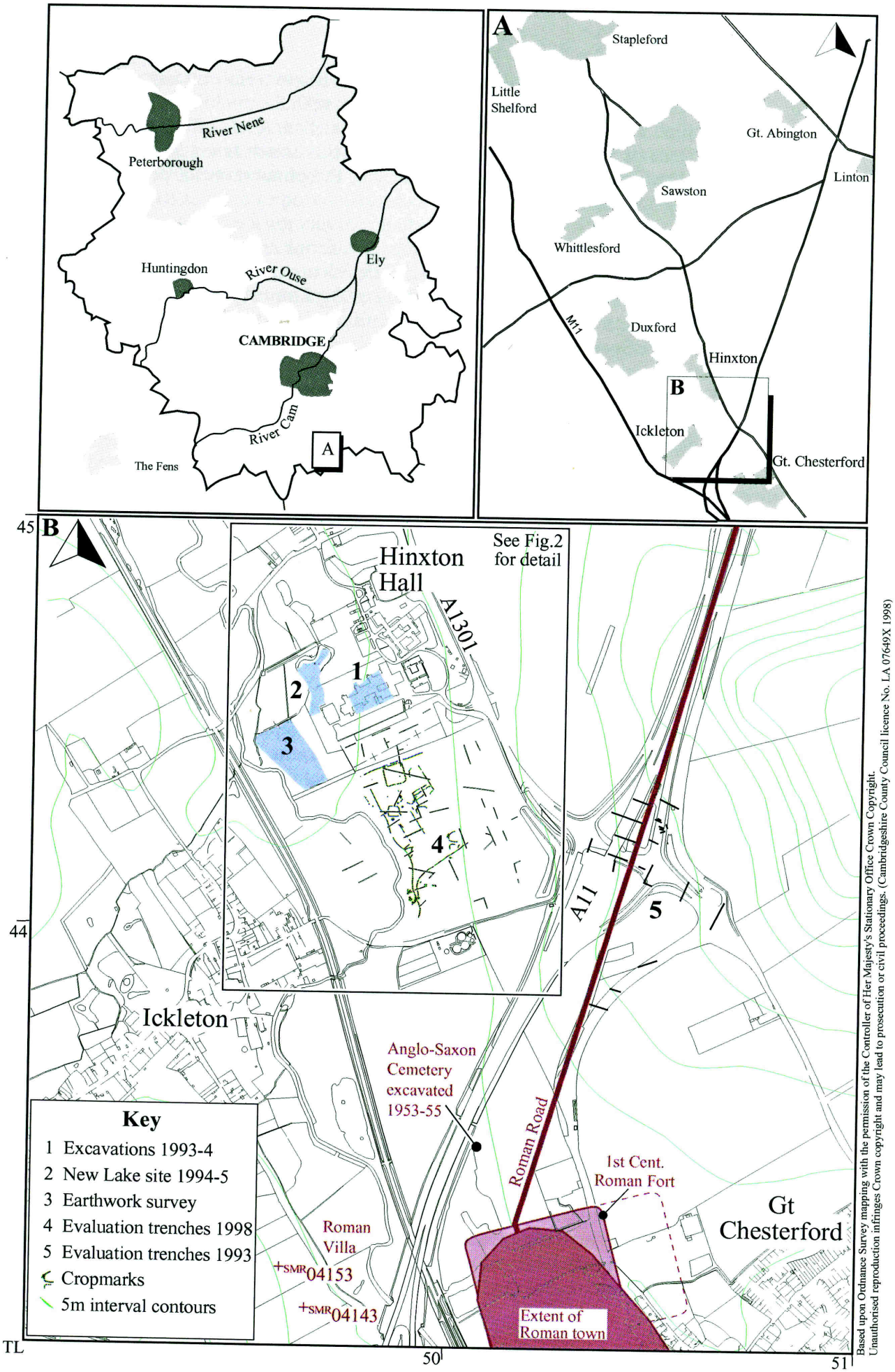

Figure 1 *Location of site and recent archaeological work in the immediate area*

The final phase of settlement activity at Hinxton Hall occurred in the late eleventh to early twelfth centuries by which time the enclosure was completely infilled and an oven placed within the infilled ditch. The demise of this settlement probably coincides with a move towards formalisation of the village around the parish church during the post-conquest period (Spoerry 1995).

The presence of rectilinear enclosures, platforms and hollow ways adjacent to the river and on the western side of the Genome research centre combined with historical references to the family of Bard have been used to indicate that in the seventeenth century, and possibly earlier, houses lay adjacent to the river (Leith & Spoerry 1995).

From the eighteenth century the area known as Hinxton Hall expanded with at least one phase of formal landscaping, this included the creation of an ornamental pond next to the house and the diversion of part of the Ickleton Road. In the mid nineteenth century Hinxton High Street was diverted around the park (Leith & Spoerry 1997).

4 METHODOLOGY

Archaeological research undertaken as part of the desktop assessment identified enclosures, pits, ditches and trackways of unknown date from the aerial photographs prior to the field evaluation. The presence of these remains was confirmed by the geophysical survey which provided greater definition of the quantity and types of archaeology present within selected areas and enhanced our existing knowledge of the development area (Leith and Spoerry 1997). Geophysical survey was targeted on areas of complex archaeology defined using the aerial photographs and therefore does not cover the full extent of the archaeological resource. However, this early response allowed the design proposals to consider the likely archaeological implications at the developmental stage.

The trenching strategy was based on the location of buildings and access road as defined at the time of the evaluation, these having been placed in part on the findings of the desk based archaeological research and survey results. Figure 2 illustrates our existing knowledge of the development, however, it is likely that aspects of the plan will be superseded as the development is refined as a result of possible planning constraints and the specific requirements of research establishments.

Following the formulation of the general development proposal a programme of linear trenching was designed to assess areas where buildings and roads would impact on any surviving archaeology. Further trenching was placed to recover dating evidence from the main groups of enclosures and pits visible as cropmarks and geophysical anomalies, but which lie a short way outside of the proposed building footprints (Figure 2). Additional trenching was used during the course of the field evaluation to resolve problems identified in the field.

Topsoil and subsoil were removed within 1.8m wide trenches of variable length (Figure 2). The maximum trench length was 100m. No alluvium was encountered therefore an overburden of between 0.30 and 0.70m (topsoil and subsoil) was removed to expose the archaeology. In certain cases machine excavation extended to a depth of 1.00m where clean sands or sands and gravels, were exposed, although this depth was only found within natural channels which cut into the chalk.

Following machine excavation and cleaning, excavation of features within the trenches progressed by hand. The location and form of all of the features was recorded using a total station and the resultant plans amended on site during the course of the evaluation. All excavated features were re-surveyed on completion of the site. Following feature excavation sections were drawn and photographed. Environmental samples were taken as appropriate in order to assess the potential of period and feature types.

All spoil heaps were inspected during machining followed by a more detailed visual inspection in order to assess the spatial variability of finds within the top soil. However, the majority of flint artefacts were recovered during casual field walking. In addition a metal detector survey was undertaken to identify any artefact concentrations which were not associated with cropmark features.

5 RESULTS

Thirty eight per cent of features were evaluated by hand, whilst the remainder were described according their plan form and their tertiary fills. Seventy five per cent of the excavated features contained artefactual remains which consisted of flint artefacts, bone, pottery, stone (burnt and quern fragments), shell, slag and daub.

Aerial photographs and geophysical survey were shown to be only partially accurate in their estimation of the types and numbers of features present within the development area. The general identification of archaeology on the western side of the main field and within around 200m of the river Cam, was correct, however, as will be seen below, there were areas within this zone where archaeological remains were found which were not evident from the survey data.

The aerial photographic data shows a discrepancy of up to 10m in places (see Iron Age ditch [40] in Trenches 15 and 16) which probably results from the presence of few secure tie-in points for the rectification of the aerial photographs, and also from modern landscape alterations which means that few of the modern landscape features would have existed at the time of the aerial surveys.

Archaeological features described below are discussed in date order. Dating has been gained by a combination of finds recovered during the excavation and, stratigraphic and spatial analysis, however, some of the individual features remain undated.

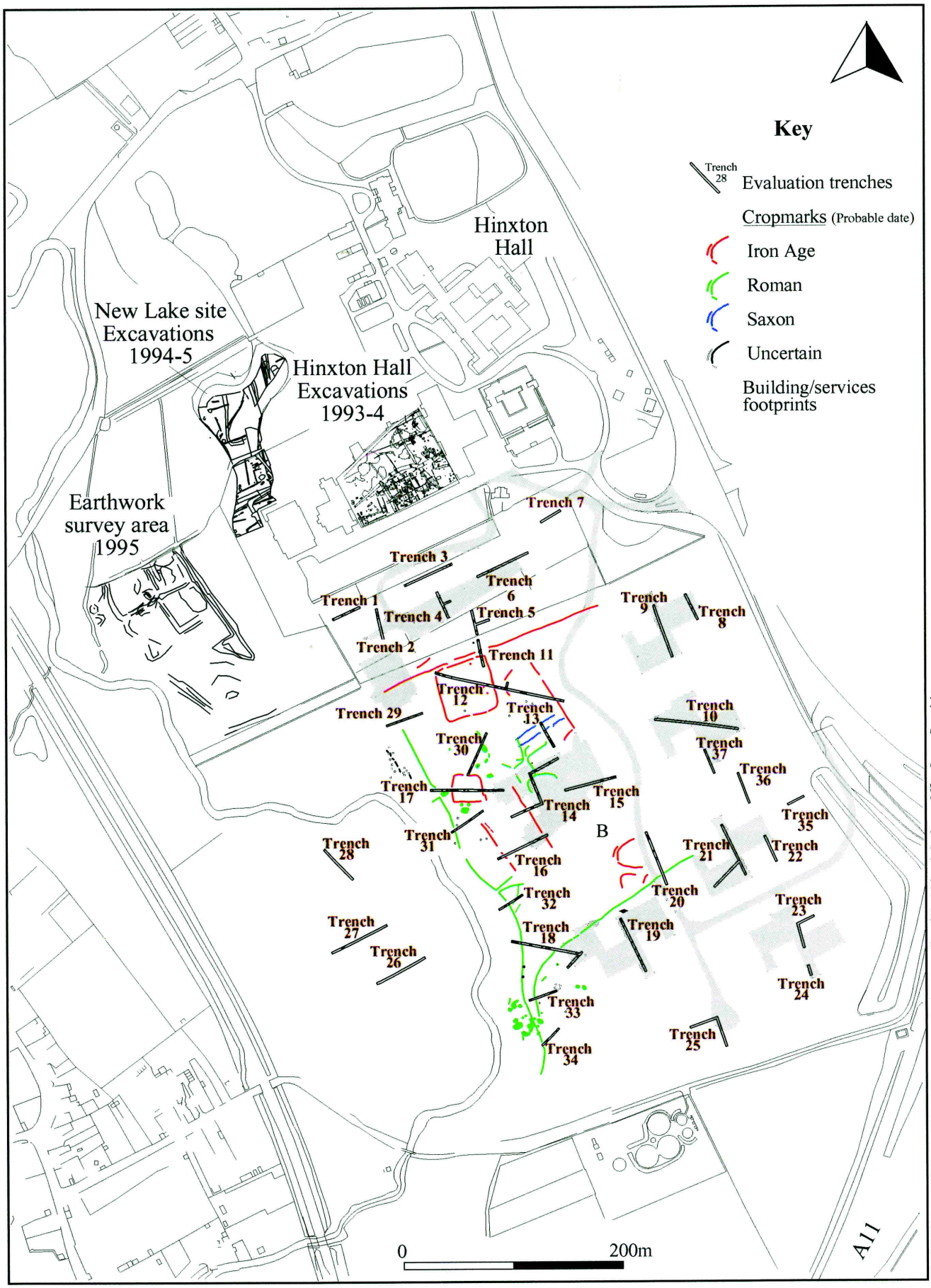

Figure 2 *Cropmarks and geophysical anomalies, trench locations, proposed building footprints and proposed access roads plus Hinxton Hall excavation areas*

Topsoil depth varies across the site between 0.20 and 0.30m. In some areas, particularly over the natural terrace gravels a subsoil of up to 0.20m in depth is also present. This subsoil is presumably the result of occasional deep ploughing which has penetrated into the gravels. Archaeology contained within this subsoil could only be seen in section; where it survives in a disturbed state. Given the existing land use and section evidence it is possible to state that the archaeology has been truncated by ploughing and up to 0.20m of archaeology has been lost. Despite this, significant deposits still survive.

At no point within the evaluation trenches was alluvium encountered even though trenching occurred within 20m of the river. However, post-Roman alluviation is recorded as being found during excavations adjacent to the river along the course of Anglia Water's pumping main (Roberts 1996).

Trenches 26 to 28 were excavated on the western side of the River Cam to evaluate for archaeological remains. None were encountered, however, below the top soil lay up to 0.76m of homogeneous organic silts which in turn overlay terrace gravels. No organic remains were in evidence. On the western edge of Trench 27 the infilled course of a palaeochannel was identified.

5.1 Neolithic and Bronze Age

This period is evidenced by the presence of flint artefacts which occurred largely within the topsoil, but, also as a residual element within late Iron Age and Roman features. The assemblage consisted of irregular blades and flakes in the main manufactured on river gravels cobble flints. Curation within the assemblage is visible through the alteration and adaptation of the few tools present. The knapping technology and artefact form is consistent with the excavated assemblages from Hinxton Hall which date from the late Mesolithic to the Iron Age, although there fresh chalk flint was the preferred raw material as opposed to river cobble flints on this site.

The assemblage again covers a broad range with periods from the Neolithic to Iron Age being present (Appendix B).

Excavations at Hinxton Hall, Hinxton Quarry and Duxford Mill have provided evidence for intense prehistoric activity along the Cam valley and in the vicinity of the development. It is likely that the sites represented in the development area continue this broad pattern of prehistoric activity, although more discrete high artefact density foci, suggestive of intense activity zones also exist within the wider landscape. For example, areas of intense late Neolithic flint working were located at Hinxton Quarry (Evans 1993), whilst late Mesolithic/early Neolithic maintenance sites for hunting have been found at Hinxton Hall (Leith and Spoerry 1997). This suggests that occupation sites are identifiable where they exist and that there are specific focal points within the landscape. Because these finds are only found in a residual form in these locations it is possible, however, that these are only presently being recognised in hindsight following the detailed analysis which occurs as part of an excavation.

5.2 Iron Age

Late Iron Age pottery of both pre-Belgic and Belgic types are present within the excavated assemblage, however, the majority of this pottery is post 50 BC in date. The presence of early Roman pottery also suggests that the site continued into the Roman period. The pre-Belgic pottery was found within a late Saxon pit and provides little indication as to the existence or likely location of early late Iron Age features within the development area.

Archaeological remains of late Iron Age date consisted of ditched enclosures, ditches, pits and post-holes.

The large northern enclosure was exposed within Trenches 11 and 12 (Figures 3 and 12) and was found to contain a complete Belgic carinated cup. This cup was found within the basal fill (126) of enclosure ditch [122] and probably represents intentional emplacement prior to the development of a natural infilling sequence. Abraded sherds of late Iron Age pottery were also recovered from both segments excavated through the enclosure ditch.

The enclosure ditch was between 2.90 and 3.30m in width and up to 1.3m in depth. Both excavated segments [86] and [122] revealed a V-shaped ditch with narrow flat base (Figure 5, Sections A and C). On the side external to the enclosed area the edge angle was much reduced or in the case of [122], the eastern side of the enclosure, stepped. The infill regime within the ditch seems to indicate that the variation within edge form is deliberate and therefore may be functional and may indicate an intention to keep livestock out of the enclosure rather than within. Both segments indicate that their infilling was gradual which may be evidenced by the presence of abraded Iron Age sherds within their upper fills.

Archaeological features of Iron Age date were entirely absent from within the enclosure, however only a small sample of the enclosure was exposed within Trench 12. Geophysical survey indicated the presence of a small number of pits within the enclosure however, their date remains uncertain. A number of Iron Age gullies lie close to the enclosure and within the centre of Trench 12. A complex of four shallow gullies ([31], [33], [35], and [37]) of late Iron Age date were found to lie within a broad shallow ditch [42]. They appear to respect the alignment of the large enclosure whilst ditch [120] lies immediately adjacent to the eastern side of the enclosure and runs parallel to the enclosure ditch.

Also found within Trench 12 was the termination of a late Iron Age ditch [112] which was also found to contain Belgic pottery alongside a sherd of grey ware which may either be of medieval or early Roman date (Appendix A). This would appear to represent part of an interrupted enclosure partially visible from the geophysical survey (Figure 3; central to Trench 12). The ditch was 2.50m wide and variable in depth; the western side of the ditch was 0.95m in depth (Figure 5, Section B) whilst the ditch termination was over 1.20m in depth. The steep sided form of the cut at the termination and its marked change in form from a flat based ditch to a substantial pit at the termination may indicate the placement of a large post at this location.

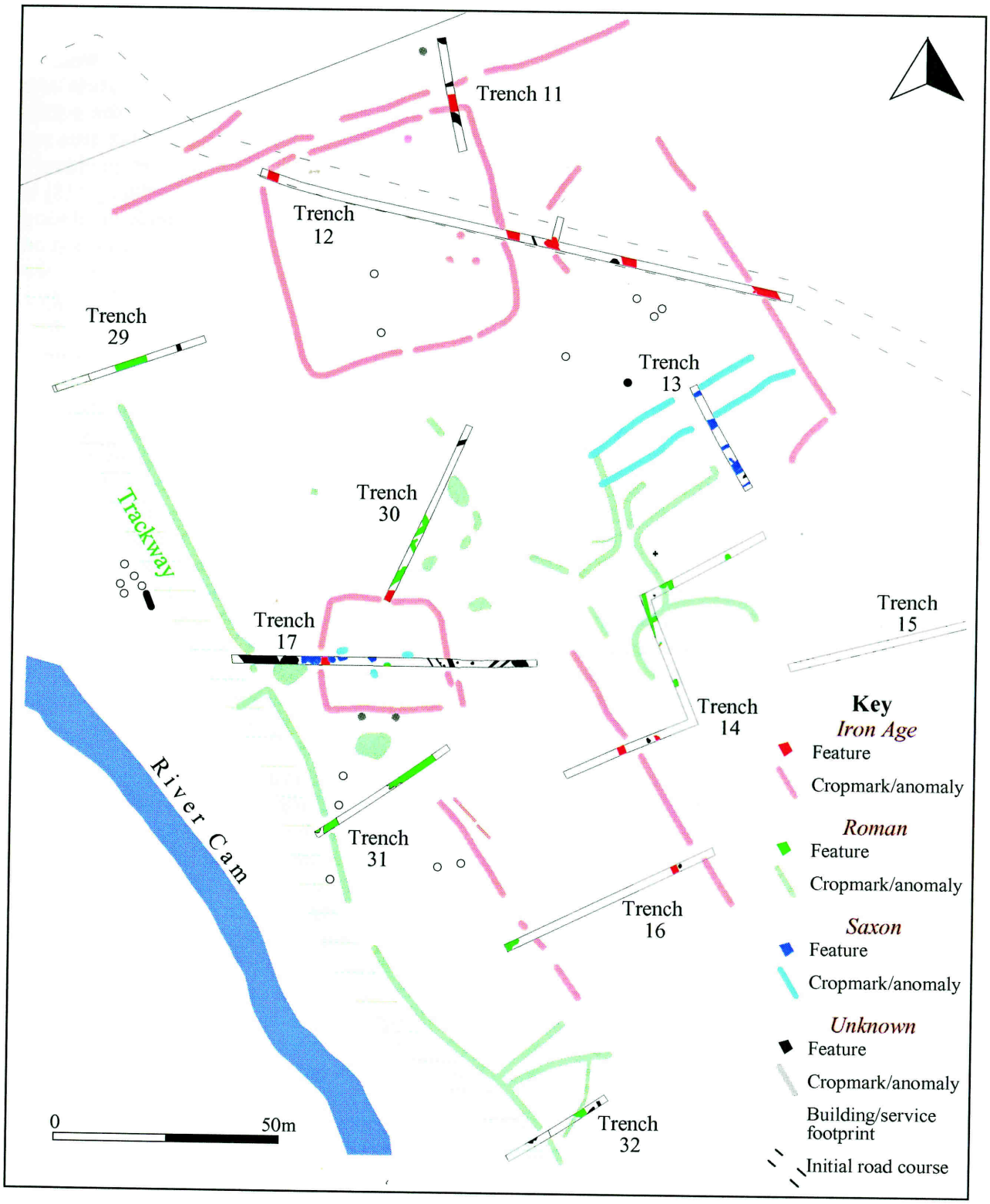

Figure 3 *Survey data and trenches in the northern riverside area with features assigned to general periods*

Trench 17 (Figures 3 and 10) cuts across the smaller of the two square enclosures. On the western side a ditch [134] was recorded in the expected position. On the eastern side a linear feature was found, however, this proved to be only a few centimetres deep and contained late Saxon pottery. This may suggest that the trench cuts across an interruption at the south eastern corner of the Iron Age enclosure which was recognised by the geophysical survey. Late Iron Age pottery was recovered from the upper fill (129) of the western ditch [134]. A late Iron Age date is suspected due to the association and complimentary orientation with the large enclosure which lies to the north-east. The Saxon pits which make up the majority of features in this area are not contained by the enclosure. No other Iron Age features were positively identified within this enclosure or adjacent to it. However, the Saxon pit [8] is a recut of an earlier pit [71] (Figure 5, Section F) from which no dating evidence was found, but this is also more likely to be of Roman or Saxon date. If the cropmarks are accurate for this area then the northern side of the small enclosure lies at the southern end of Trench 30. Within Trench 30 lay a combination of pits and ditches, their form suggests a continuation of Iron Age or Roman activities.

Additional Iron Age remains were found in Trench 14 (Figure 3 and 9). Iron Age pottery was found contained within the fills of ditch [40], in association with charcoal and animal bone in a deposit which resembles redeposited midden material. Sixty three per cent of the Late Iron Age assemblage was found within this ditch, the assemblage being composed of small sherds of native and Belgic forms. The mixing of vessels throughout the infill sequence suggests rapid infilling and possibly from an adjacent midden. The ditch itself is 1.55m in depth and 0.87m in depth (Figure 5, Section D). The ditch extends southwards from Trench 14 into Trench 16. It is here that an aerial photographic error of up to 10m is suggested as the only ditch visible in Trench 16 is as predicted in line with ditch [40], but lies to the west of the cropmark. Elsewhere, particularly around the northern enclosure, the error appears to be slight.

Faunal material from Iron Age features consists mainly of cattle, although small ponies, sheep, pig, dog and chicken are also present in small quantities. Environmental samples from the ditch around the small Iron Age enclosure produced a poorly preserved cereal grain and a number of burrowing snails. Although fine silts and clay laminations at the base of ditch [134] suggest seasonal flooding or standing water there was no evidence for freshwater molluscs. A Celtic coin (Trinivantes Cunobeline) dating between 20-43 AD was found on the site by metal detectorists.

Late Iron Age activity within the development zone consists of activity adjacent to the two enclosures and, on present evidence, appears to be absent from within these enclosures. However, the form of the enclosure ditches may suggest otherwise. Large quantities of pottery associated with midden material in ditch [40] in Trench 14 suggests that occupation areas may have lain close to this trench and were probably unenclosed.

The presence of significant quantities of cattle remains indicates that agriculture was dominated by livestock farming along the riverside. This site may therefore have similarities with Herod's Farm, Foxton which was believed to have specialised in animal husbandry (Macaulay 1995). The

presence of pottery, structural features and midden material probably indicate the presence of a small Iron Age farmstead.

5.3 Roman

The Romano-British remains within the development area consist of pits, ditches and quarries and are focused on the riverside gravels between Trenches 29 in the north and 18 in the south, and also around Trenches 13 and 14. Pottery recovered from the fills of these features suggests a continuum of activity from the late Iron Age until about 400AD, although caution must be exercised in this assumption bearing in mind the limited numbers of features excavated.

Pitting and quarrying activities of Roman date are located along the entire course of the River Cam within the development area, and are particularly pronounced in the area between Trench 32 and Trench 34 (Figure 4, A). Here, only the large quarry pits were visible through aerial photographic and geophysical prospection, although a number of pits and ditches indicative of Romano-British activity were also present. The quarry pits within these trenches are up to 7.50m across and extend to a depth of about 1.10m ([154]). They were filled with a mixed dump layers of soil and chalky gravels. The excavated pits were in the order of 2.20m in diameter and 1m in depth, however, they were commonly irregular with undercut edges ([68] and [153]. In all cases these pits and quarries cut into the chalky terrace gravels indicating the extraction of this raw material.

Trench 14 (Figure 9) contained two intercutting Roman ditches alongside a series of undated post holes and pits. The earliest of these two ditches [39] is north-south orientated, 1.70m in width and 0.55m in depth and was filled with sandy silts. Two post holes, 0.30m in diameter lay along the edge of this ditch suggesting the presence of a fence along part of its course. Ditch [39] was cut by the east-west ditch [4] which was 1.50m in width and 0.46m in depth and also filled with sandy silts with chalk fragments. The two excavated pits in this area were sub-rectangular in shape and about 1.50m by 1.00m in size with a maximum depth of 0.70m. These were filled with sandy silts with occasional chalk flecks and flint gravels.

In Trench 13 a single pit [141] of over 1.1m depth and heavily truncated by Saxon ditches was partially excavated (Figure 8 and Figure 5, Section G). Although this pit contained no dating evidence, it is atypical of the Saxon remains found during the evaluation as large quantities of burnt daub were contained within it. It is therefore more likely that this pit relates to the pits and ditches recognised in Trench 14 and a period of Roman activity centred on this area.

The cropmarks and geophysical results which relate to features visible in Trenches 13 and 14 (Figure 3) suggest a complex series of interlinked sub-rectangular enclosures which our excavations suggest to be Roman in date. The ditches present in Trench 30 indicate that this activity area, although not visible by other prospection techniques extends north westwards from Trench 14 into Trench 30.

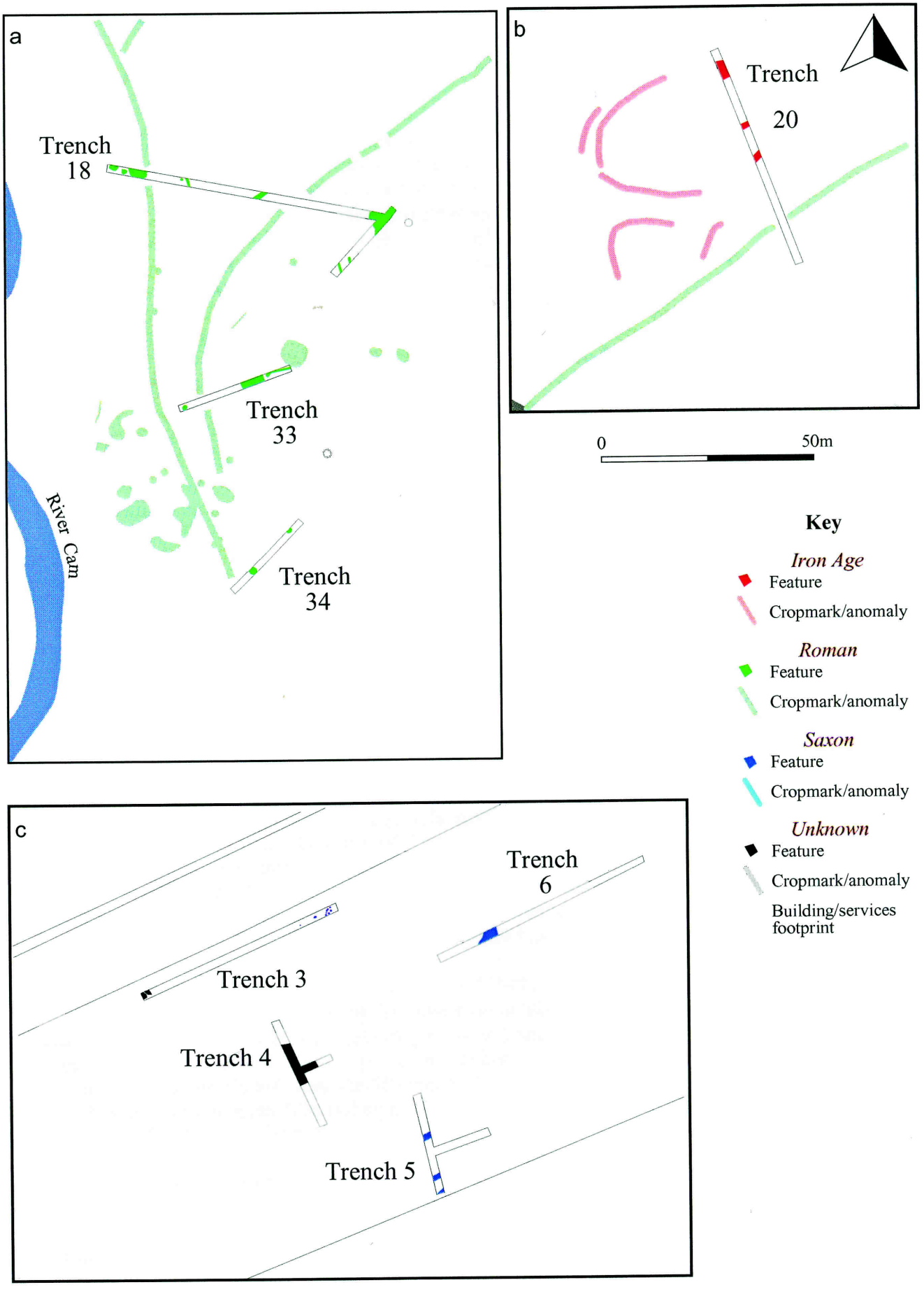

Figure 4 *Detail of survey data and trenches in three areas with features assigned to general periods*

Trenches 17 and 29 exposed a large riverside ditch [72] and [76] which is visible on the aerial photographs and can be seen to extend north and southwards along the course of the river (Figures 2 and 3). Due to health and safety restrictions full excavation within the evaluation trenches was prevented; the date of this ditch remains unknown. However, on the riverine side lies a gravel bank which was exposed in Trench 29. The presence of many Roman finds in the vicinity may indicate that this is a Romanised trackway which runs from Great Chesterford northwards along the course of the River Cam. The course of this 'routeway' appears to be marked on the 1799 OS 1" First Edition (draft) which indicates its longevity as a landscape feature, although at some point since the Roman period it was replaced as the main routeway to Great Chesterford by a road or trackway leading directly from Hinxton village and through the medieval open fields.

Animal bone from Romano-British features indicates that there was a reduction in the number of cattle bones present, whilst horse, sheep/goat, pig, dog and chicken? were also present. Environmental samples from pit [141] contained charcoal and a single carbonised grain.

Metal work recovered by metal detectorists was largely found on the western side of the large Iron Age enclosure and adjacent to the Romanised trackway. Another area of Romano-British metalwork lay immediately to the south of the small Iron Age enclosure. The coins recovered during this survey date from the 2nd century to the fourth century. A 2nd century brooch and two 3rd-4th century bronze rings were also found.

The evidence suggests two types of Romano-British activity occurred in the development area which are probably to some degree contemporary. Pitting and quarrying occurred along the riverside in proximity to the river and track with raw materials either being transported away by boat or cart. The small interlinked sub-rectangular/sub-circular enclosures, fence alignments, post-holes, pits with daub, alongside the presence of small quantities of Roman pottery, suggest that the gravel terraces less immediate to the river and trackway were used for agricultural purposes and continue the activities associated with the earlier farmstead. This agricultural activity extended northwards into the grounds of Hinxton Hall and is probably related to the late Roman agricultural enclosures identified by the AFU during excavations within the new lakes (Leith 1995).

5.4 Saxon

Both early and late Saxon pottery was recovered from excavated features. The evaluation suggests the activity areas centred around the break in the riverside ditch just to the south of Trench 17 and on the northern side of the development area in Trench 3.

Early Saxon pottery was found within a large pit [71] excavated in Trench 17 and this may indicate that the first phase of activity in this area was of early Saxon date. In addition seven sub-circular to sub-rectangular pits of probable late Saxon date were identified in Trench 17 of which two were excavated. Pit [8] was 2.20m by at least 1.20m in size; extending beyond the trench edge.

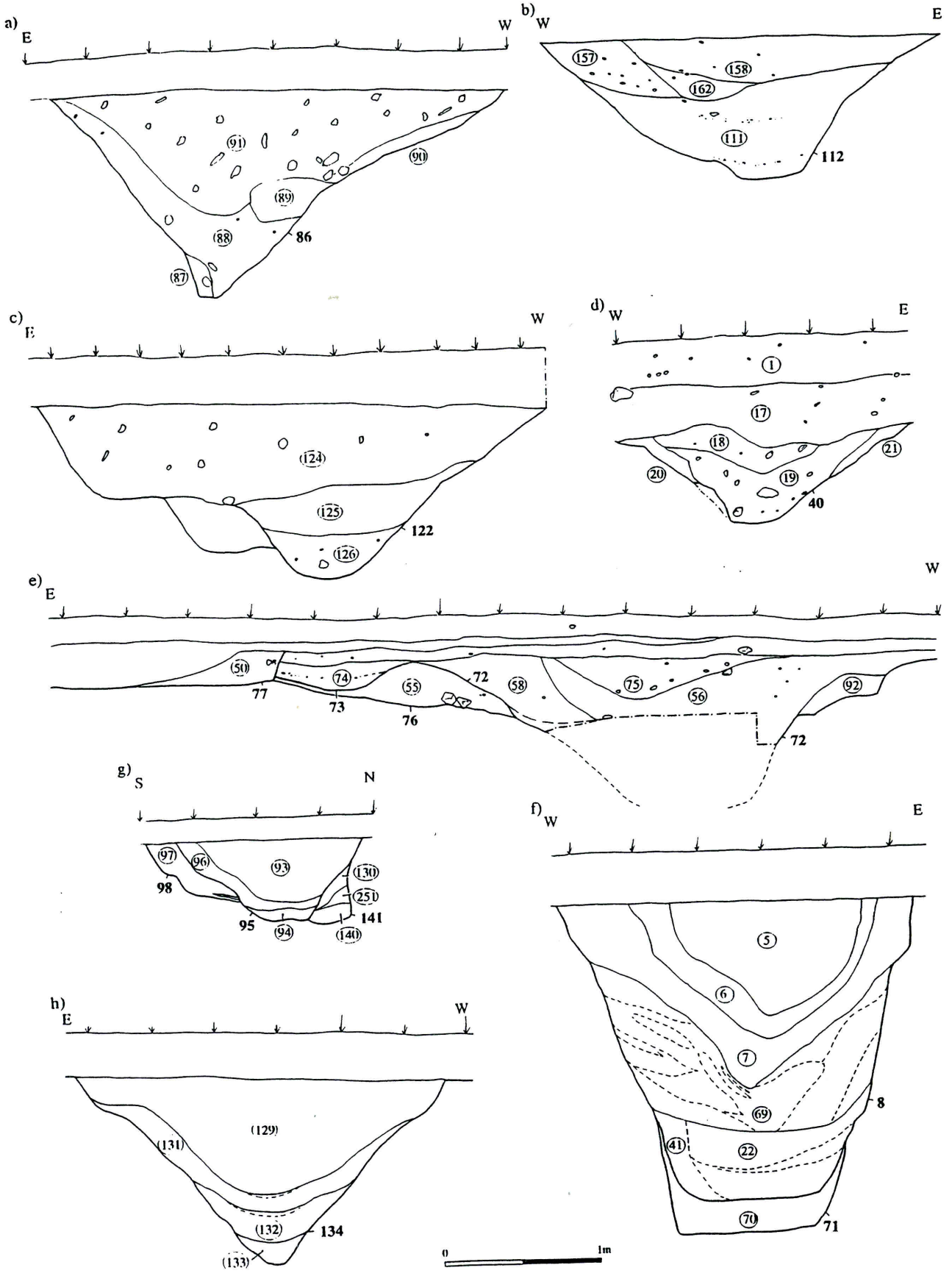

Figure 5 *Selected sections through archaeological features*

This pit had a depth of 1.92m and recut an earlier pit [71] which was 2.12m in depth. The basal and only remaining fill of [71] was comparatively sterile, whilst [8] was filled with a series of lenses indicative of rapid infilling (Figure 5, Section F). Within these deposits late Saxon pottery was recovered, particularly from (22) and (41), whilst early Saxon pottery was recovered from fill (5). The other pit [16] was a steep sided pit infilled in the late Saxon period. The pit was 1.50m by at least 1.10m in size with a maximum depth of 0.70m with fills suggestive of a more gradual infilling regime than observed in pit [8].

The intensity of pitting would appear to indicate that this episode was relatively long-lived as evidenced by recutting of pits and the presence of intentionally infilled pits adjacent to those allowed to silt up over time. The size, form and fills of these pits show a remarkable similarity to the late Roman pits excavated within the Temple Precinct at Great Chesterford (Miller 1995). Other pits of probable Saxon date were found during the machine excavation of Trench 30. Cropmarks and geophysical survey indicate that pitting extended as far northwards as the large Iron Age enclosure, however, at present it is uncertain as to whether these are of Romano-British or Saxon date.

Some distance to the east of the Saxon pits lie a series of parallel ditches which were exposed in Trench 13 (Figure 8). A pair of broad ditches were identified, one of which was excavated. Cut [95] is a recut of an east-west orientated ditch which the aerial photographs suggest runs down towards the river. Ditch [95] is 2.38m in width and 1.04m in depth. [98], the remnant of an earlier ditch which ran on the same alignment, was found on the southern side [95]. Both ditches were filled with clayey silts with moderate amounts of flint gravels and both have the appearance of ditches which have gradually silted up. The fill of [98], however, contained burnt daub which must have originated in pit [141] which it presumably cut through. The relationship between ditch [98] and pit [141] has, however, been removed by the subsequent excavation of ditch [95]. Late Saxon pottery was recovered from the fills of both ditches.

Also in Trench 13 lay three narrow east-west orientated ditches. These were up to 0.98m in width and about 0.40m deep. They occurred at a distance of between 11 and 13m apart. No dating material was found within these features, however, similar ditches were excavated in Trench 5 ([80] and [83]) which were about 11m apart and contained a single sherd of abraded late Saxon pottery. These two ditches were about 1.30m in width and 0.60m in depth and were slightly more curvilinear in plan than those in Trench 13, however the alignment and spacing of these ditches suggests that they represent land divisions of the late Saxon period and thus they may precede the later medieval cultivation strips commonly marked by ridge and furrow.

In Trench 3 (Figures 4 and 6) there were 11 post-holes which, although undated, lie in close proximity to the Saxon settlement of Hinxton Hall and therefore probably relate to that site. Five of these post-holes were excavated, they were of between 0.30 and 0.46m in diameter and up to 0.30m in depth. Apart from the presence of three groupings, no particular pattern appeared to be represented, however, inspection was restricted by the limitations of a 1.80m wide trench. A series of ditches were also recognised as running

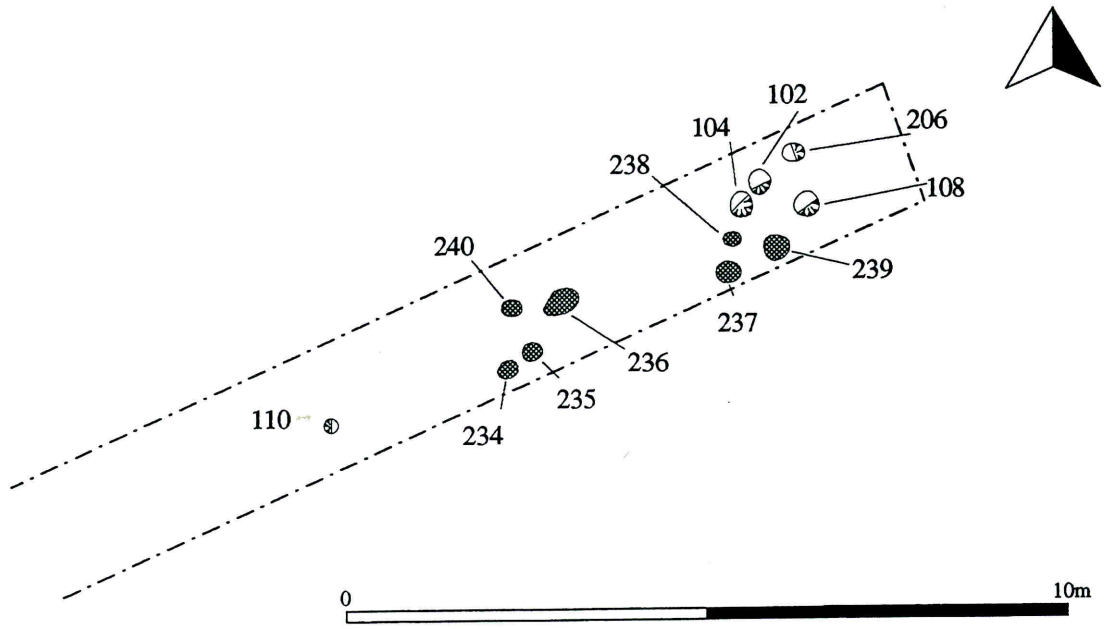

Figure 6 *Plan of eastern end of Trench 3*

north-south from the Saxon settlement area and are presently assumed to relate to this period of activity as well.

The Saxon period sees a dominance of sheep/goat within the faunal assemblage, although cattle are still present. Pig and chicken are also present, as are the bones from a cat. Saxon deposits contain both pony and horse size equids.

Environmental samples taken from pit [8] (Trench 17) included the remains of charred cereal grains, mineralised seeds and invertebrates suggesting that the feature contained cess. Two frog/toad skeletons were also identified.

Saxon metal work included a 5-6th century wrist clasp and a 9-10th century strap end. Wrist clasps are commonly found within pagan Saxon burials and therefore Trenches 35-37 were excavated in order to evaluate for the presence of a cemetery where this item was found. As no cemetery was recovered it is suspected that the wrist clasp represents casual loss by the former owner, however, it is always possible that scattered burials lie somewhere within this area.

The evidence for Saxon activity in this landscape consists of pits and ditches. The ditches represent field boundaries and a trackway, on a roughly north east to south west alignment. The trackway although appearing to conform to elements of the Romano-British enclosure plan shown on the aerial photographs cuts across areas of intense Roman activity as shown by pit [141]. The trackway, although not continuous on the aerial photographs, is

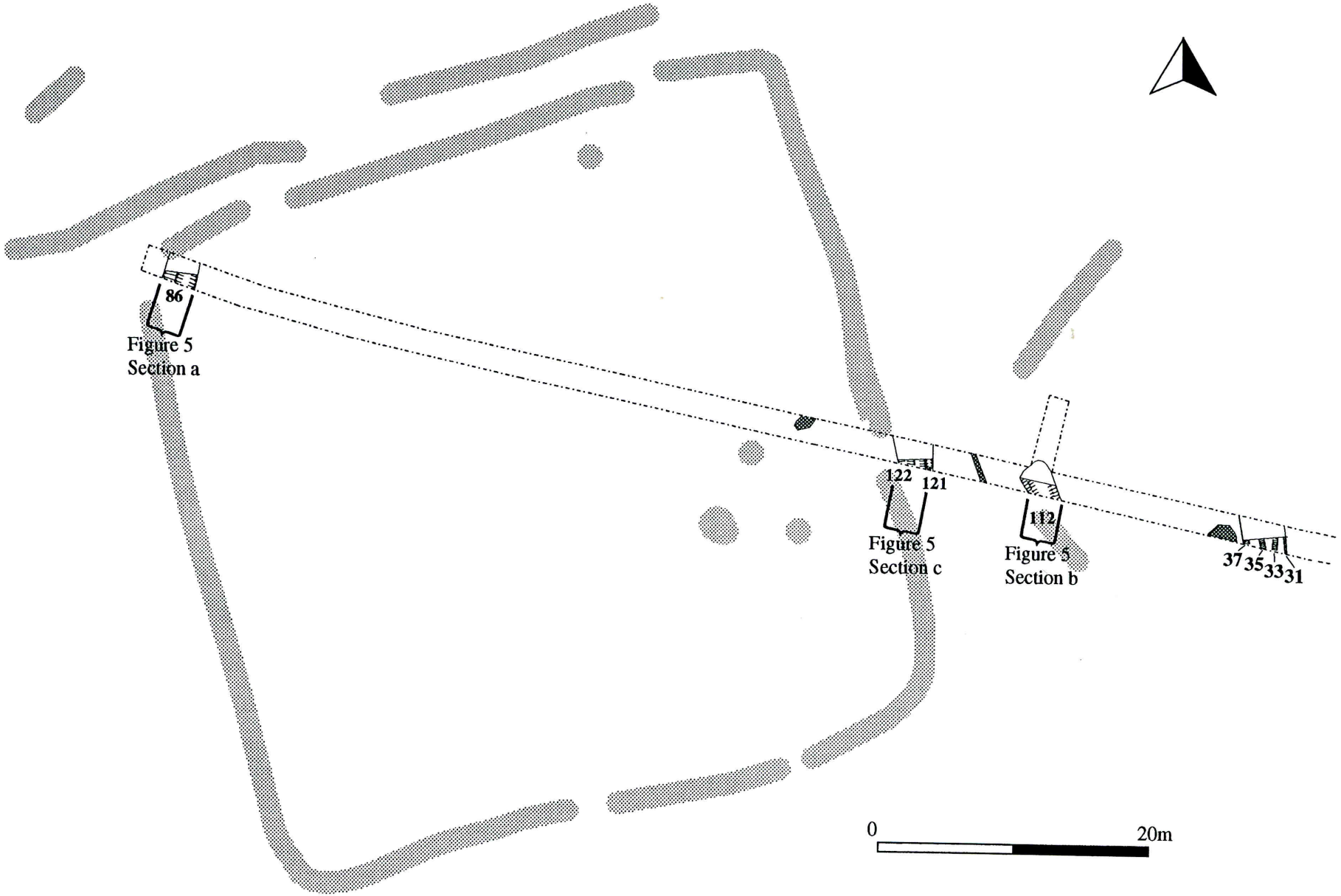

Figure 7 *Plan of Trench 12*

directed down towards the river and in particular towards a break in the riverside ditch, which may indicate that this ditch was still extant at this time. However, as the trackway was at no point visible within Trench 17 it is more than likely that it stops adjacent to the area of Saxon pitting. The presence of cess within pit [8] in Trench 17 and the general presence of artefactual material here suggests an activity focus adjacent to the trackway terminus, riverside ditch and river. The metal work may suggest the presence of the occasional pagan Saxon burial on the chalk areas which lie on the eastern side of the site.

5.5 Medieval and Post-medieval

No medieval or post-medieval features were identified during the course of this work. The cartographic research undertaken as part of the desktop assessment suggests that this land was used for agricultural purposes for much if not all of this time. Metal work of this date consists of parts of copper alloy buckles and other fixtures and fittings which support the suggestion of agricultural use for this land.

5.6 Modern

Modern features identified during this work were restricted to the enclosed area at the northern end of the site. These features consisted of wheel ruts presumably from vehicles transporting earth away from the 1993/94 excavation area. This area was also used as a compound during the construction works for the Genome research centre. These activities resulted in compaction to the soils and substrate as well as the integration of building rubble into the topsoil. Few archaeological remains were encountered from which an estimation of the impact of these activities could be gained.

5.7 Undated

Features contained within Trenches 29 to 34 were exposed during the final days of the field evaluation. These remained unexcavated and therefore undated other than by association. Where appropriate this association is discussed within the preceding paragraphs and illustrated within the appropriate period setting.

The post-holes in Trench 3 were also undated, however, their proximity to the Saxon settlements at Hinxton Hall has resulted in their discussion in the Saxon section within the preceding paragraphs.

In Trench 4 a large hollow of 10m in diameter was identified and partially excavated. No finds were recovered and the sections indicate a hollow containing leached sediments This hollow was similar to those identified during the 1993-1994 excavations. These features acted as foci for late Neolithic and Bronze Age activity.

Adjacent to Trench 20 lie a series of interrupted curvilinear ditches, visible on both the aerial photographic and geophysical survey plots, which form an arc. Although the cropmark evidence suggests that they terminate before Trench

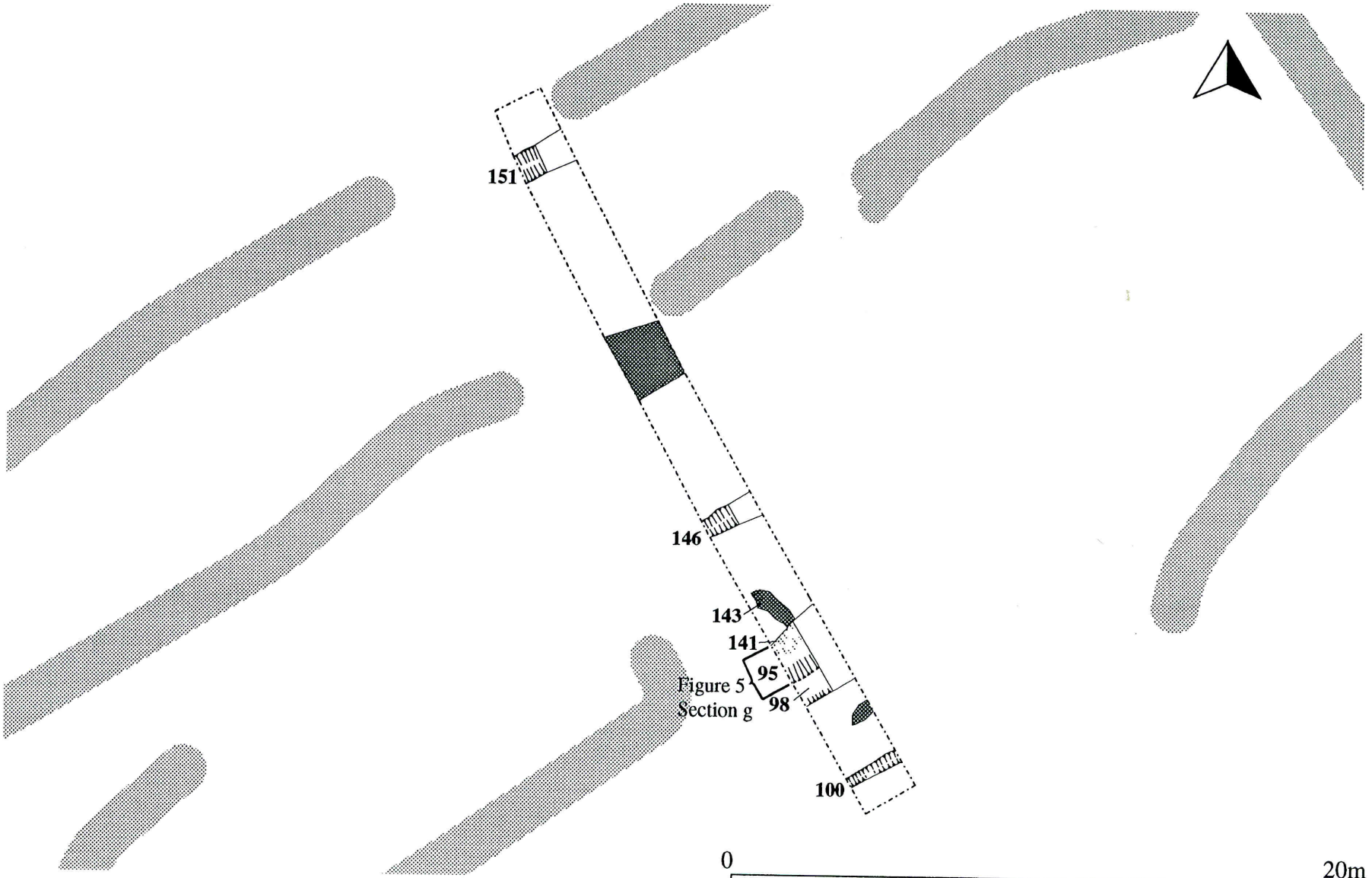

Figure 8 *Plan of Trench 13*

20, ditches on a similar alignment were identified in the trench and therefore may be related (Figure 4, B). Excavation of one of these ditches recognised a broad depression into which three gullies were set ([114], [116] and [118]). The infill sequences appears to be gradual with a fill of silt sands with occasional gravels. The form of these ditches is very similar to the Iron Age ditch and gully system ([31], [33], [35] and [37] and may indicate a similar Late Iron Age date.

It is likely that the importance of these enclosures has formerly been understated due to their incomplete representation in earlier surveys, lack of conclusive dating evidence and the complexity of the superceding enclosure systems. The complex is represented on the aerial photographic and geophysical survey as three parallel north-west southeast orientated ditches which were visible in Trenches 12, 14 and 16. The enclosures in Trench 20 appear to hang from the easternmost of these ditches and given the incomplete picture of these remains it is likely that the Iron Age curvilinear enclosures in Trench 12, evidenced by ditch [112], also hang from this boundary.

6 DISCUSSION AND ARCHAEOLOGICAL SETTING

The evaluation has indicated the survival of a complex archaeological landscape represented by features such as post-holes, pits, ditches quarries and trackways which show a high intensity of prehistoric and historic activity.

The archaeology has been truncated, however, features survive to a good depth and were found to contain pottery, lithics, animal bone and environmental remains. Seventy-five per cent of all the excavated features were found to contain finds. This indicates that where further work is required it should be possible to phase the archaeology securely through stratigraphic, artefactual and scientific means. Once the archaeology has been suitably phased the distinctions between the Iron Age, Roman, and Saxon animal bone assemblages will become more apparent and their significance in terms of the site economies can be analysed.

6.1 Early Prehistoric

The early prehistoric archaeology is sparse within the development area and occurs in a residual form. *In situ* sites prior to the Iron Age appear to be unlikely, although it is possible that they exist closer to the river preserved below alluvium, although at present there is no evidence within the development area to indicate such.

The exception is archaeology within the gravels relating to the paleolithic period and environmental data relating to the paleochannel observed in Trench 27. The presence of this latter feature suggests that good environmental data for the Quaternary and particularly the early Holocene may exist close by. During evaluation no early prehistoric remains were found associated with these organic sediments. Thus further information relating to these aspects of early prehistory may be revealed during the stripping and excavation of the

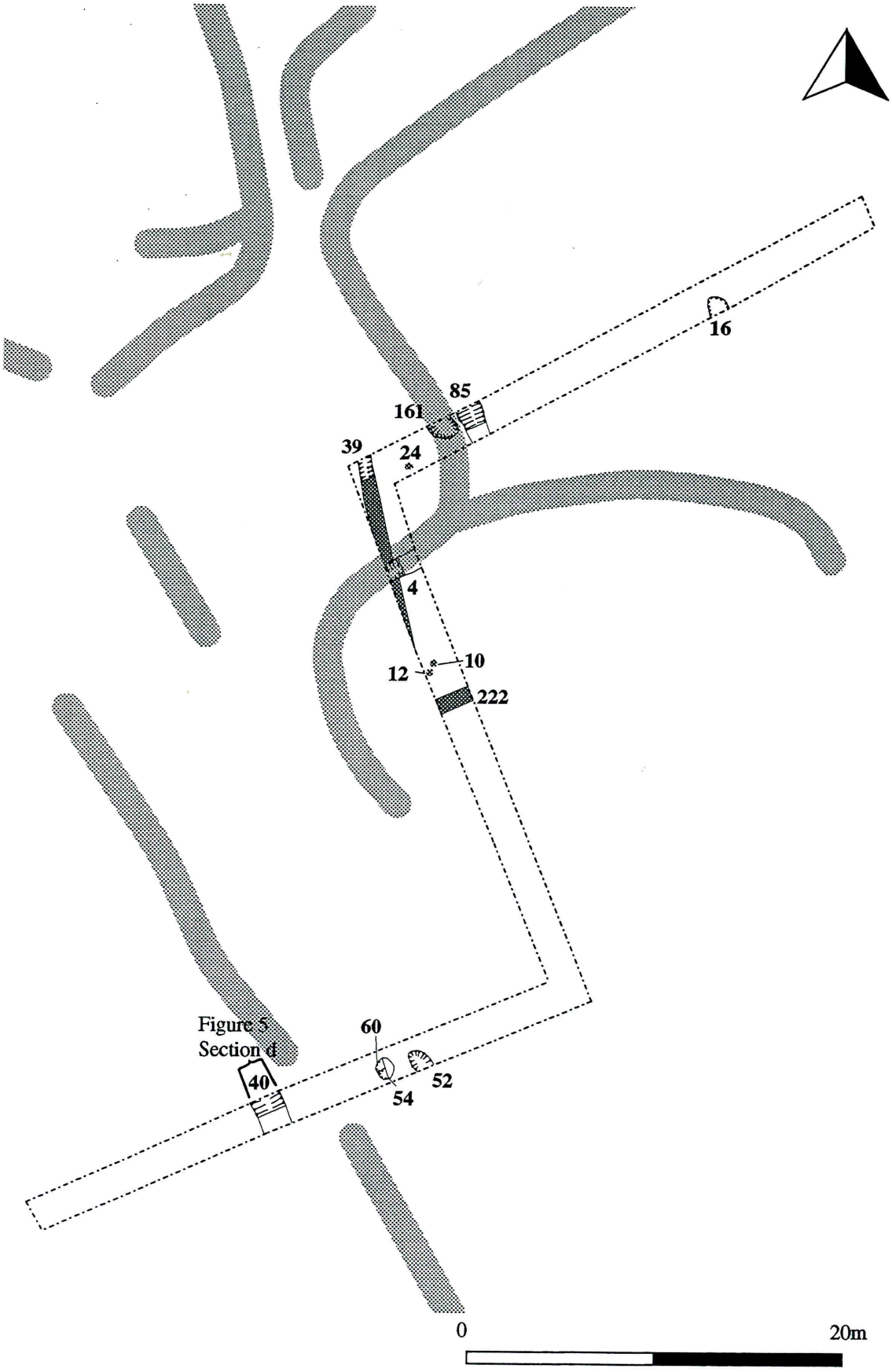

Figure 9 *Plan of Trench 14*

proposed balancing lake when a much larger sample of this landscape will be revealed.

During the early prehistoric periods it is likely that the development area lies within a widely exploited activity zone. The quantity of lithic artefacts recovered indicate that the site are present, however, the intense activity centres identified within the Hinxton Quarries and at Hinxton Hall appear to be absent. It is possible however that the lack of definition may indicate the constraints of the existing methodology. The presence of hollows on the northern side of the development area, of a type which were the focus for Neolithic and Bronze Age activity at Hinxton Hall, indicates archaeological potential; so far these have been devoid of archaeology.

6.2 Iron Age

The pottery recovered from excavated features indicates the presence of pre-Belgic and Belgic forms suggesting that late Iron Age occupation began prior to 50 BC. Iron Age occupation cannot be specifically located, however, the large quantities of pottery from ditch [40], the presence of post holes and also early Roman pottery in Trench 14, suggest that it is quite likely to lie in this general location. The presence of similar types of feature within Trench 30 suggests that the occupation may spread this far. The absence of known Iron Age features within the two square enclosures suggests that neither of these features relates to occupation and therefore they may have served an agricultural purpose. From the animal bone recovered from Iron Age features cattle husbandry may be the most likely explanation.

The animal bone suggests the existence of a farmstead involved in livestock production, although few of the animal bones have been butchered which intimates that processing occurred elsewhere and may confirm the sites similarity to Herod's Farm, Foxton (Macaulay 1995). However, it is equally possible that as our approach has concentrated on the types of features visible through the aerial photographic and geophysical surveys we have unintentionally selected these livestock related activity zones within a broader Iron Age landscape. Further investigation is required to elucidate this problem as whilst the existing bias predisposes us to indicating a level of economic specialisation similar to Herod's Farm the mixed farming economies of Edix Hill and Rectory Farm, Shelford where agricultural zoning has been identified, may prove to be more appropriate models (Malim forthcoming, Trump et al 1978).

The significance of this Iron Age farmstead lies in its survival and transformation into the Roman period. The potential for a large animal bone assemblage associated with pottery makes it possible to assess the alterations in site economy through this period. It is also a site which is dissimilar from the other Iron Age sites in the Cam valley in terms of the presence of coinage and its discrete square enclosures which are unlike other Iron Age enclosures in the Cam valley. These are normally sub-rectangular, as seen at Hooper's Field Barrington and Foxton Brook Shepreth, and complex in form with interlinked settlement and stock enclosures (Malim forthcoming). In addition farmstead sites such as at New Wimpole during the same period indicate a

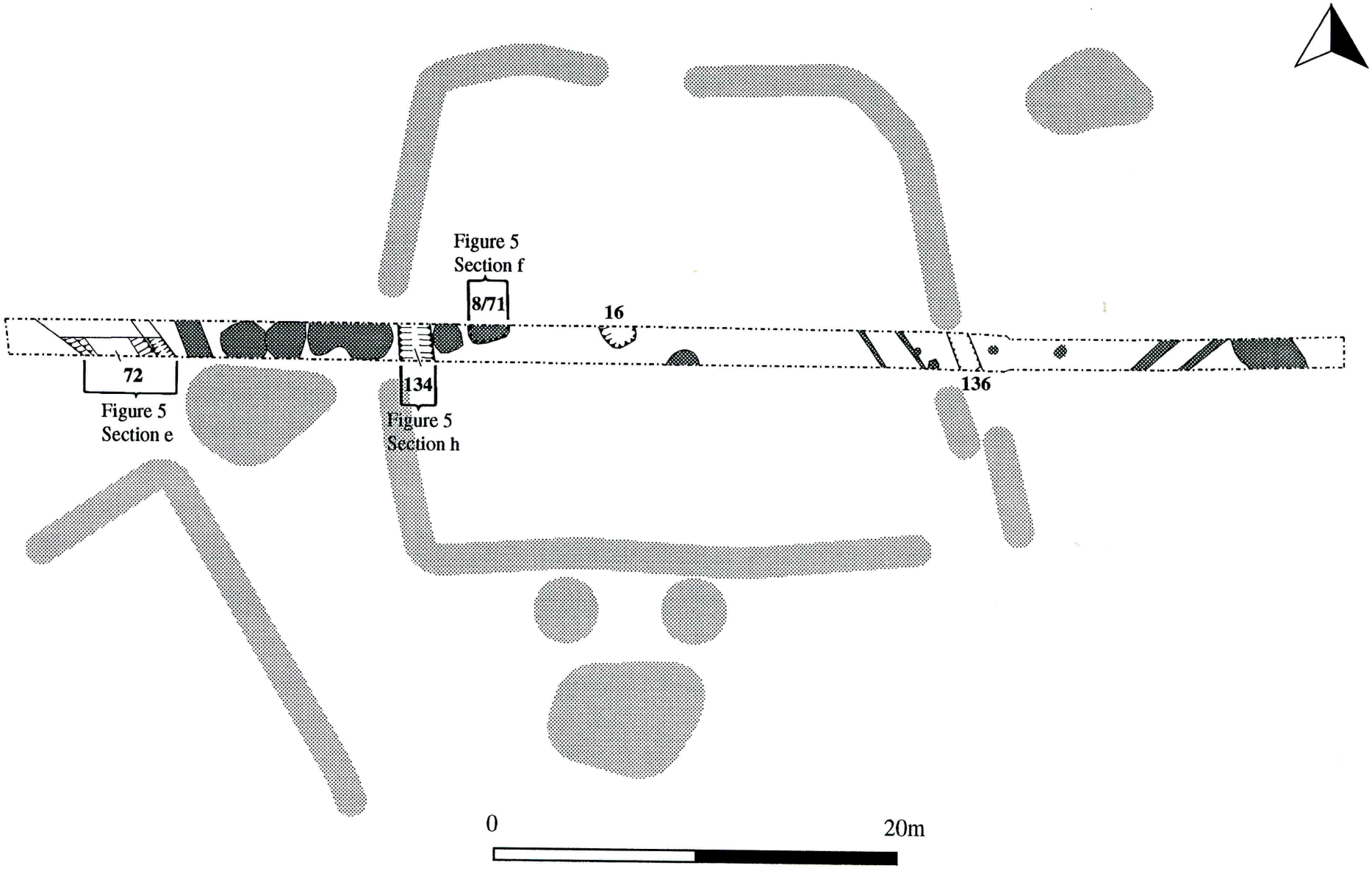

Figure 10 *Plan of Trench 17*

degree of investment in existing boundaries which is not the case at Hinxton (Taylor et al 1997).

The Iron Age and early Roman remains at Hinxton do not appear to evolve in the above fashion, ditched boundaries are not recut and the ditch and enclosure alignments rarely respect earlier systems. The appearance is of an area undergoing punctuated or rapid landscape re-organisation throughout the late Iron Age and into the early Roman period. These enclosures are more similar in form to the later Roman enclosures found during excavations at the New Lake site in Hinxton Hall and whilst the change is suggestive of the early Roman settlement shift at Herod's Farm, Foxton (Macaulay 1995).

The date of this farmstead coincides with the cemetery at Hinxton Quarry (Evans 1993). It is likely that the late Iron Age changes in burial practice and social relationships observed within the quarry will be reflected in other aspects of the Iron Age landscape, and particularly in the organisation of farming practices which may be in evidence at Hinxton Riverside. It is very possible that we are seeing changes indicative of an Iron Age people who are actively embracing the changes prevalent within this area in the late Iron Age early Roman period and making their statements of allegiance within the structure of the landscape.

6.3 Roman

Pottery evidence suggests that the Iron Age landscape use continued into at least the early Roman centuries, although an element of reorganisation influenced by the development of Great Chesterford is implied.

Pottery is sparse in the Roman period suggesting the decline of the Iron Age farmstead, however, the animal bones indicate that livestock farming continues which may imply that settlement had become more centralised and/or lay outside of the development area. The land available to agricultural activity by the river appears to become more restricted during this period as quarrying activities occur along the course of the trackway which lead from Great Chesterford to at least the Roman enclosures at Hinxton Hall. The interruptions in the riverside ditch may imply a need for access to the river and that riverine transportation was an important mode of commerce along the Cam in this area.

The significance of the Roman remains within the development area lie in their association with Great Chesterford and the economic controls that such a town would have over its hinterland, and in turn how the hinterland re-organised itself to fulfil the needs of its central place. As many small late Iron Age/early Roman farmsteads such as at Hinxton, Edix's Hill Barrington, Pepperton Hill Duxford, Herod's Farm Foxton and Wimpole shifted or were abandoned in the first century AD, major alterations to the way agricultural systems were organised within the Cam valley are suggested and require further investigation.

6.4 Saxon

Late Saxon pottery was recovered from an area of intense pitting within Trench 17. The dating of these remains suggests an association with the late Saxon settlement at Hinxton Hall excavated in 1993/94. The pits are clustered and the infill sequence indicates that they were not all open at the same time; in certain cases they inter-cut. Samples from pit [8] indicate that the final infilling deposits were associated with the disposal of cess, however, neither of the excavated pits provided an indication of their primary function.

In Trench 3 post-holes of probable Saxon date were encountered which indicate that activity areas associated with the settlement excavated in 1993-4 extend southwards into the development area. Apart from in Trench 17 material of this date was sparse elsewhere in the development area. The area of riverside pitting activities would therefore appear to be isolated and linked to the main settlement by a series of track systems seen in Trench 13 (Figure 3).

The significance of these remains is that they provide additional evidence concerning how the Saxons at Hinxton Hall were involved in the use of their immediate landscape and that such activities may not be purely related to agriculture. The animal bone assemblage also indicates how the economy within this landscape changed over time and the significance of sheep/goat as opposed to cattle within this location at this period is interesting. At Hinxton Hall, where a much larger sample was recovered, the late Saxon period sees cattle as the most prominent species, the beasts being primarily farmed for their live, or dairy, products. Sheep and goats also present, but in slightly lower numbers and apparently farmed primarily for meat (Gidney in Spoerry and Leith forthcoming).

The presence of early Saxon burials, if present, will also allow for the extension of models of landscape utilisation beyond the immediate surroundings of the settlement at Hinxton Hall. On the basis of the work so far carried out this remains, however, an outside possibility.

6.5 Undated

The significance of many of these remains will probably be found in their relationship to the above. The remains in Trench 20 and the cropmarks to the west (Figure 4, B) may prove to be the most significant. Similar ditches to those excavated in Trench 20 were found in Trench 12 and were dated to the late Iron Age. As the fills indicate the infilling rather than the excavation of these enclosures, they may in fact predate the late Iron Age square enclosures. In which case the research significance of the site would be greatly enhanced as further work would allow access to a period of late Iron Age landscape transformation, from a new late Iron Age agricultural layout being imposed on the earlier system to the decline of the farmstead in the early Roman period.

7 CONCLUSIONS

The archaeological field evaluation at Hinxton Riverside has confirmed the survival of archaeological features previously identified from cropmarks and geophysical survey. The evaluation has shown that these remains date from the late Iron Age through to the late Saxon. Although these remains were truncated by ploughing the archaeology survives to a depth of over 2m in places with the shallowest features penetrating 0.20m into the terrace gravels.

The earliest archaeology present within the development area consists of a general background scatter of Neolithic, Bronze Age and Iron Age flint work which lies within the topsoil or later archaeological features. These remains and their association with the intense activity centres of Hinxton Hall and Quarry are obviously of importance in understanding the early prehistoric spatial and chronological patterning. However, it is difficult to extricate this data when the material is in a residual form and the most significant results so far obtained have been as a result of excavations defined to assess later cropmark remains.

The earliest identified cut features are of late Iron Age date and represent a small farmstead comprising post-built structures, pits, boundaries, midden deposits infilling ditches and enclosures. Romano-British archaeology of early Roman date initially continues the Iron Age land use pattern, although later pitting and quarrying for the extraction of sands and gravels occurs along the riverside and the isolated square enclosures are replaced by small interlinked enclosures land to the east appears to continue as a zone of agricultural activity.

Whilst these remains suggest a rapidly changing landscape structure which is unlike recently excavated late Iron Age farmsteads in the area, there are similarities which suggest an economic cohesion to the region. The site has a faunal assemblage similar to Herod's Farm Foxton, which appears to have specialised in animal husbandry and fits in to a pattern of small farmstead decline and settlement shift during the first century AD. It is therefore possible that the social pressures and political allegiances alluded to by Evans in 1993 are represented in this landscape restructuring.

During the late Saxon period, and possibly earlier, a discrete zone of pitting occurs along the riverside within the area around the smaller of the Iron Age enclosures. A trackway from the Saxon settlement at Hinxton Hall runs down to this 'activity focus' which could be an agricultural processing station or a hithe or fording point. The importance of these remains lie in their extension of the late Saxon activity zone thus bringing a fuller understanding of landscape and the concept of landscape study for this period.

The evaluation has helped to identify important elements of the Iron Age, Roman and Saxon landscapes which will help us to understand the activity zones, their inter-relationships and their temporal and spatial transformations.

8 IMPORTANCE OF THE REMAINS

8.1 Iron Age and Romano-British

The Iron Age and Romano-British remains have local importance, providing a good, but truncated, example of a settlement and landscape type that is nevertheless rendered more significant, certainly up to regional level, through the likelihood of there being continuity of occupation across the change point between these periods, and from the contextual relationship with the Roman town of Great Chesterford. The square enclosures are apparently of late Iron Age, rather than Roman, date which is a feature not commonly observed elsewhere. It is clear from sites such as Rectory farm, Shelford that enclosures are probably only one element of a larger interdependent farm system. In addition, the suggestion that curvilinear enclosures in the area of Trench 20 and also the gully system in Trench 12 may both be part of an earlier Iron Age boundary system is significant and extends the possible land-use sequence further.

The decline in the late Iron Age agricultural system is visible in other small late Iron Age/early Roman farmsteads in south Cambridgeshire. This restructuring requires closer inspection in order to assess the apparent changes in service requirements of the central place (the Roman town of Great Chesterford) and the requirements of the farmstead inhabitants.

The linearity of quarrying and other activity along the riverside 'Romanised trackway' provides another link with the Roman town and how such a sizeable town affects its hinterland and extracts services from outlying settlements and farmsteads The track itself may suggest a key routeway along the river valley and thus represents a feature of regional significance which was not previously recognised. This routeway would have been important for satellite industries servicing Great Chesterford and may have provided a link with settlements and farmsteads further along the Cam valley.

8.2 Saxon

The late Saxon remains have a significance that is enhanced from local-regional up to regional-national level, through the association that might be made between a possible non-domestic activity focus and the excavated settlement close by at Hinxton Hall. Non-occupation centres seen within their full landscape context are a class of remains that are little understood. Although the remains are probably not extensive or complex the research potential for this period is high when viewed alongside the previously excavated settlement.

9 THE IMPACT OF THE PROPOSED DEVELOPMENT AND MITIGATION OPTIONS

9.1 Iron Age

The impact of development within building footprints is deemed to be total on account of the provision of underground car parking. The building locations lie mostly outside of the most visual cropmarks of this period, however, as discussed above, these obvious rectilinear cropmark enclosures are devoid of occupation and have been provisionally interpreted as stock enclosures. The area that has produced remains indicative of Iron Age occupation is essentially that around Trench 14, possibly extending towards Trenches 30 and 17 (eastern end) and possibly towards Trench 13. The larger part of this zone is within a proposed building footprint and all remains here will thus be destroyed by this development unless mitigation options are executed. These occupation remains do not, however, appear to be dense. Only one artefact-rich Iron Age feature has been excavated (ditch [40] in Trench 14). No other features here produced large artefactual assemblages.

A move of the proposed building northwards would not result in avoidance of this group of remains, whilst a move to the south east would move the impact into an area that may look comparatively devoid of archaeology but which has not yet been evaluated in detail and may, like the area around Trench 30, contain further archaeological features. The proximity of Trench 20 and features in its vicinity becomes relevant here as well. The enclosures visible here might represent further low density Iron Age remains.

Preservation by record of all remains within the building footprints in the vicinity of Trenches 13, 14 and 30 would offer an opportunity to record and understand a partially surviving site with some high research potential. Preservation *in situ* is unlikely to be valid with a site of this 'middling' calibre which does not possess an obvious focus. In addition topsoil stripping of the building footprints in the areas of Trenches 2, 4, 5 and 29 should be carried out under archaeological supervision and provision be made for excavation recording of remains so revealed.

9.2 Romano-British

As with the Iron Age remains, the continuation of agricultural activity, and possibly occupation, into the Roman period in the general area of Trenches 13 and 14 suggests an area of archaeology under direct threat from development. The likely value of these remains and the arguments for preservation options can be taken to be the same as for their Iron Age antecedents insofar as there are few artefact-rich features and the enclosures and occupation are probably a continuation of the activities identified for the previous period. Preservation by record of all remains in the vicinity of Trench 14, and possibly extending beyond the footprint towards Trench 13 to ensure an appropriate level of interpretation, is recommended.

The second area of Roman-British archaeology is the riverside trackway and remains clustered along its length. These are unlikely to be damaged by

development except in the area around Trench 29 where the proposed building will remove a section through this linear feature which nonetheless would also offer an opportunity to sample it in detail. Preservation by record of remains within the building footprint in this general area is the most favourable option which will allow for preservation *in situ* (being undisturbed) of most of this feature alongside valuable research into its origins along a short piece of its length.

9.3 Saxon

The outside chance of occasional early Saxon human burials in the eastern part of the site is remote enough to not warrant action other than that covered by a general recording brief.

The focus of late Saxon pitting adjacent to a possible river access point, plus the presence of a track leading to the previously excavated settlement represents a key set of remains which lie outside of the proposed building footprints and thus are not under threat from the main construction impact.

The light spread of probable Saxon period settlement remains in Trench 3 suggest that the creation of an access road on the extreme northern edge of the site will impact of the periphery of the settlement that was mostly excavated in 1993-4 and that a provision for preservation by record will be needed here if development proceeds. In addition topsoil stripping of the building footprints in the areas of Trenches 4, 5 and 6 should be carried out under archaeological supervision and provision be made for excavation recording of remains so revealed.

9.4 General

A layered process of evaluation from desk-based work, through cropmark analysis and magnetometer survey to trenching has given us an excellent picture of archaeological remains on the subject site. Despite this, however, the discovery of new remains during trenching suggests that caution should be exercised in writing off parts of the site where no trenching has been carried out, particularly within 200m of the river.

The fact that most archaeology on the site is present cut into natural at depths of less than 0.5m indicates that creation of new access roads will impact on archaeology; as will any other development impacts at a similar depth. Consideration should be given to the preservation by record of any remains along the linear impact of the proposed access road and within any other areas of impact relating to secondary development works (service laying, landscaping, creation of construction compounds etc.). Pre-construction topsoil stripping under archaeological supervision followed by excavation recording of any remains so revealed is recommended for road lines in all areas on the western half of the site east of the river.

Creation of the balancing lake west of the river Cam may well reveal information concerning early prehistoric landscapes; both within the gravels and within paleochannels cutting the top of these deposits. It is recommended

that an archaeological recording brief be attached to these works whereby such remains can be briefly sampled and recorded under controlled conditions.

10 ACKNOWLEDGEMENTS

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APPENDIX A

Hinxton Riverside Pottery Evaluation

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Introduction

The evaluation produced a mixed assemblage of pottery ranging in date from the late Iron Age to early medieval period. A total of 318 sherds (149 vessels), weighing 4.42kg was recovered. The pottery was examined by context and 29 fabric types identified. These were recorded using the Bedfordshire Ceramic Type Series fabric codes. The common name for each fabric type allows for compatability with other local type series. Only the Iron Age assemblage is evaluated more fully below.

The Pottery

Late Iron Age pre- 'Belgic' pottery

Fabric	Vessel	Sherd	Weight (g)
F03	18	45	1426
F20	6	14	235
F28	31	109	1458
Total	55	168	3119

Late Iron Age 'Belgic' pottery

Fabric	Vessel	Sherds	Weight (g)
F06A	2	2	68
F06B	2	2	16
F34	1	1	16
Total	5	5	100

Romano-British pottery

Fabric	Vessel	Sherds	Weight (g)
R01A	3	13	32
R06B	4	4	86
R06C	3	3	18
R08	5	5	37
R13	1	1	4
R19	1	1	15
R22B	1	1	7
R25	1	1	1
Total	19	29	200

Saxon and Saxo-Norman pottery

Fabric	Vessel	Sherds	Weight (g)
A01	2	2	13
A16	5	7	28
A18	3	3	50
B	5	5	15
B01	17	38	384
B01A	1	14	97
B01B	1	3	81
C12	3	7	52
Total	37	79	720

Medieval pottery

Fabric	Vessel	Sherds	Weight (g)
C	6	6	23
C01	6	9	75
C53	1	1	13
C60	1	1	28
C61	6	7	49
C75	11	11	52
P01	1	1	16
Total	**32**	**36**	**256**

Pottery summary (vessel nos in brackets)

	COMMON NAME	VESSEL FORM	DATE RANGE
LATE IRON AGE PRE 'BELGIC' (55) 37% total assemblage			*c.* **-50BC
Type F03 Type F20 Type F28	grog & sand tempered limestone/chalk inclusions sand tempered variants*	jar undiagnostic cordoned jar, ovoid vessel	
LATE IRON AGE 'BELGIC' (5) 3% total assemblage			*c.* 50BC-50AD
Type F06A Type F06B Type F34	fine grog tempered coarse grog tempered sand tempered	carinated cup, jar jar undiagnostic	
ROMAN (20) 13% total assemblage			*c.* 50-400
Type R25 Type R01A Type R19 Type R22B Type R08 Type R06B Type R06C Type R13	eggshell central gaulish samian amphora Hadham reduced black micaceous coarse greyware fine greyware shell tempered	undiagnostic Dr. 37 - jar undiagnostic jar jar undiagnostic	C1 C2 C2-3 C2-3 C2-3 C2+ C2+ C2+
SAXON (10) 7% total assemblage			*c.* 400-850
Type A01 Type A16 Type A18	organic tempered coarse sand tempered fine sand tempered	undiagnostic undiagnostic jar	
SAXO-NORMAN (22) 15% total assemblage			*c.* 850-1150
Type B01 Type B01A Type B01B Type C12	St Neots-type St Neots-type (orange) St Neots-type (fine) Stamford ware	everted rim jar, inturned rim bowl everted rim jar imturned rim bowl jug	
EARLY MEDIEVAL (31) 21% total assemblage			*c.* 1150-1250
Type C01 Type C53 Type C60 Type C61 Type C75 Type C	sand tempered sand tempered ('pasty' surface) Hertfordshire-type greyware calcareous inclusions micaceous unid sand tempered	jar undiagnostic undiagnostic undiagnostic undiagnostic undiagnostic	
POST-MEDIEVAL (1) 1% total assemblage			*c.* 1500-1750
Type P01	glazed earthenware	bowl	
MISCELLANEOUS (5) 3% total assemblage			
Type B	unid shell tempered	undiagnostic	?late Iron age/Saxo-Norman

The Iron Age fabrics

Six Late Iron Age fabric types were recorded.

Pre- 'Belgic' pottery:

F03 - sand and grog; these vary in the proportion of inclusions one to the other

F28 - fine to medium sand; these vary in the coarseness of the sand and may also include rare grog (or natural argillaceous inclusions) and other mineral inclusions; the commonest fabric type in the assemblage
F20 - limestone/chalk inclusions; these may also include some sand, and vary in the coarseness of the calcareous inclusions

'Belgic' pottery:
F06 - grog-tempered subdivided into F06A (fine) and F06B (medium)
F34 - fine sand, differs from F28 in the fineness of the sand and the wheel-thrown nature of the forms

Evidence for use
A number of pre- 'Belgic' vessels bear evidence resulting from use. The presence of external sooting on one vessel, resulting from suspension over direct heat, suggests use as a cooking pot. Six vessels bear traces of internal black residues/sooting, probably resulting from the accidental burning of vessel contents during cooking. A single F28 jar base from context (19) has regularly spaced post-firing perforations of *c.* 10mm in diameter. These are a not uncommon find on Iron Age settlement sites, although their function is uncertain (Wheeler and Wheeler 1936, 66; Wainwright 1968 *passim*; Dawson *et al* 1988, 17).

Decoration/surface treatment
Combing and twig brushing/scoring (random, vertical and horizontal) are the most common decorative element, occurring largely on vessels in coarse fabric type (F03). This form of decoration is reminiscent of the middle Iron Age motifs of the Ancaster-Breedon style, concentrated in, but not restricted to, the area between the Trent and Nene rivers (Cunliffe 1991, 557). The site is on the edge of the scored ware distribution. This style of decoration continued into the late Iron Age, its purpose being not solely decorative, but as an aid to lifting, by roughening the surface, similar to the applied thumbed strips on medieval vessels. Vessels of fine sandy type (F28) are smoothed or burnished to varying degrees.

Pottery from the Iron Age features

Ditch [40] contexts (17), (18), (19)
This feature comprised three fills, together containing 63% of the Iron Age assemblage. This is a good assemblage of pottery, with little residuality or intrusion. It primarily comprises hand-made vessels of native tradition, but also vessels with 'Belgic' elements. A jar with rippled shoulders, from the bottom-most fill (19), is handmade but the form is of 'Belgic' type, Thompson's form B2.3 (1982, 127). One other possible wheel made shoulder sherd was recovered from the top fill (17). A number of vessels found thoughout the ditch fills are decorated by burnishing their exteriors or by deep scoring of the surface. The fabrics are primarily coarse sand and grog, and sandy types, and these seem to be mixed throughout the fills. The limestone and sand fabric occurs in the bottom (19) and middle (18) fills of this ditch. Its absence from the top fill may have a functional or chronological significance, although the small quantitiy appearing on the site makes this difficult to determine.

The assemblage is a mixture of incomplete vessels, some comprising small singleton sherds only, others comprising more than five sherds. One large storage jar with a post-firing perforated base, was made up of 75 sherds (1040 g) from the bottom fill (19) with 2 sherds from the upper fill (17). One other vessel comprised 14 sherds from the top fill (17) and 7 sherds from the middle fill (18). These cross-contexts

indicate possible intermixing post-depositon, for example through animal action, but more likely, the infilling took place within a short space of time and from the same source, possibly a midden, even though the layers could be distinguished archaeologically.

The date of the final infilling of this ditch is some time in the second half of the 1st century BC or early 1st century AD.

Ditch [86] contexts (88) (91)
This large enclosure ditch was made up of two fills. The pottery within them is very fragmentary, comprising singleton sherds only. There is little obvious residuality or intrusion, in that the asemblage is consistant in its late Iron Age date. Fabrics are primarily sandy with a single example of coarse sand and grog, and the only decorative motif is deep scoring on the surfaces of four sherds.

The basal fill comprised only two sherds, one of which is a wheel made, fine sandy vessel; it is, however, abraded. The upper fills comprised four Iron Age sherds. The nature of the assemblage from this ditch is very different from that in ditches [40] and [22]. Although all of comparable date, the pottery was deposited long after its breakage and possibly as secondary deposition, perhaps as midden material, to infill the ditch. No deliberate placing of pottery vessels is evident.

The date of the infilling of this ditch is comparable to ditch [40], some time in the second half of the 1st century BC or early 1st century AD.

Ditch [122] contexts (125) (126)
The terminal of this ditch produced a small assemblage of pottery, among which is a complete wheel thrown 'Belgic' grog-tempered carinated cup, Thompson's form E1-4 (1982, 371, no 17). This was found in the basal fill of the ditch. The only other sherds in this part of the ditch are two abraded sherds from sandy and coarse sand and grog vessels. The carinated cup was probably deposited deliberately in the base of the ditch, prior to its final filling in, in what Hill (1995, *passim*) has called an 'intentionally structured deposit'. These special deposits of complete vessels are known from other Iron Age sites in the country. They were deposited in 'significant' features, such as enclosure ditches, storage pits, and pits within pit alignments (Pollard 1996, 111). It is not certain whether the vessels were deposited empty or whether the importance of this act lay in the contents of the pot.

Thompson (1982, 369) dates the carinated cup to the early 1st century AD, probably the date of this deposit, although it has also found in post-Conquest deposits.

Ditch [112] contexts (111) (152)
The two layers of this ditch terminal produced a small assemblage of pottery, comprising singleton sherds only. Its nature is closer to the assemblage from ditch [86] than to the 'special' deposit in the terminal of ditch [122]. A single greyware sherd was recovered from the basal fill. It has been recorded as medieval although the undiagnostic nature of this pottery means it could as easily be early Roman in date. The assemblage contains wheel thrown, grog tempered wares in the 'Belgic' tradition, including a small fragment of a pedestal jar rim, Thompson's form A (1982, 33), as well as some hand made sherds in sandy and coarse sand and grog fabric types. It also

has a single sherd of 1st century Roman eggshell ware. Although small, there is no reason to suppose that this sherd is intrusive.

The final filling of this ditch probably occurred some time in the 1st century AD.

Discussion

No early Iron Age pottery was recovered from the site and it is likely that any settlement activity of this date was situated some distance from this point of the riverside. Early prehistoric activity is known in the vicinity.

Cunliffe (1991, 87) states that too little data is availabe as yet about the Iron Age in this region (the Chilterns, Nene valley and adjacent areas of East Anglia) to be able to define regional groupings. A unifying factor, however, is the presence of heavily scored wares deriving from the Ancaster-Breedon style, common in the East Midlands, and present in quantity at Hinxton (Elsdon 1993,5).

The Iron Age assemblage indicates a rural, low to middling status site. There are no Gallo-Belgic imports, and no early samian. The pottery comprises primarily wares in the native tradition, with some 'Belgic' influence. Few wheel thrown 'Belgic' vessels were recovered. This area is on the edge of the core of 'Belgic' distribution and is therefore important in its relationship both to the core and to the peripheral regions. The relationship of this site to that of the late Iron Age 'Belgic' cemetery, about 2km to the north, is also important (Evans, Hill and Alexander forthcoming). It will add to our knowledge of settlement ceramics as compared to that recovered from cemetery sites.

The riverside was little used in the late Iron Age, at least in the vicinity of the cemetery. This lends greater importance to this site in relation to the riverine landscape around Hinxton as a whole.

Assemblages of late Iron Age grog-tempered, wheel made, pottery are rare in Cambridgeshire. Sand tempered vessels are typical of the middle Iron Age tradition in the area, and the pottery at Hinxton is evidence of a continuation of this tradition into the late Iron Age, overlapping with the introduction of wheel thrown 'Belgic' wares. Ceramics are a key to answering the question of chronology, extent and degree of Romanisation. The Study Group for Roman Pottery highlights this as a key avenue of research (Willis 1997, 18), and the transitional pottery at Hinxton will add to this study.

There is little evidence of major settlement structures in the evaluation, but the pottery indicates its presence close by. Sherds with internal residues and/or external sooting, as well as the modified vessel from ditch [40], are evidence of this. The absence of structures within the enclosures suggest agricultural use such as animal pens, although these would have been close to a settlement area. Settlement may have occurred in the area of Trench 14, although not necessarily permanent. It may have been associated with riverine (craft, fishing etc) activity, in addition to being a crossing point on the river.

All diagnostically Romano-British material dates predominantly from the 2nd-3rd centuries. Coarsewares are represented by a range of greywares and blackwares, probably of local manufacture. Diagnostic forms are few. Continental wares and regional imports are scarce, the former represented by two abraded samian vessels and

single sherds of Spanish amphora and Gaulish eggshell type, the latter by a single sherd of Hadham greyware, from Herts.

Summary

This is a small but important assemblage of late Iron Age and early Roman pottery, which will contribute significantly to three particular avenues of research;

1 the chronology, extent and degree of Romanisation in this region;
2 the relationship of the area of core 'Belgic' distribution with its periphery and the place of this site at the boundaries of these two areas;
3 the question of settlement shift or change in function from rural settlement to craft/industrial use in the early Roman period.

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APPENDIX B

Lithic Report for Hinxton Riverside Evaluation.
Assessment Report.

Steve Kemp

Exotics and burnt flint

The majority of stone recovered during the course of hand excavation ie sandstones, limestones and flint would have been available in the terrace gravels whch the site occupies. The exception to this are the vesicular basalts. This material occurs in very fragmentary form, however, the larger pieces indicate that the material was originally used for quern stones. Provisional dating suggests that these quern stones were present in both Iron Age and Saxon contexts.

Burnt flint was collected from many of the excavated contexts, however, quantities were small. The occassional fragment of lightly burnt sandstone was also present. The low levels of firing and small quantities of burnt stone present within the collected assemblage suggests that these remains are not associated with hearth (domestic or industrial) activity and such activities were not undertaken in the immediate vicinity of these features.

Lithic artefacts

Although majority of artefacts can clearly be seen to originate from cobble flints which would have been readily available within the terrace gravels the excavated collection can be broadly divided into two:

1. Dark grey and dark brown flints on which the flake based assemblage has been manufactured. Flake size varies widely and is probably restricted by the quality of the raw material. Step and hinge fractures are common as are multiple percusion strikes. The degree of preparation prior to flaking is very variable and in the main absent. Two rejuvination flakes are present indicating the need to maximise the return from any 'good' flint it also suggests that there was probably a high level of curation within the assemblage. A bi-polar and unipolar core were recovered.

Formal tools produced on these flints include side and end scrapers. A miscellaneous retouched piece which consisted of a side/end scraper with spur which indicated a multifunctional piece developed over time until its eventual discard was also present.

An unfinished arrowhead was also found, presumably abandoned as a result of a series of hinge fractures occuring during manufacture. The shape of the blank suggests that a Neolithic leaf shaped arrowhead was being manufactured.

A broad period of flint artefact manufacture is probably represented within this assemblage. The main flake and tool assemblage would be consistent with a Neolithic and Bronze Age date. An Iron Age component is probably present evidence by short hard hammer flakes with broad plain platforms and multiple percussion marks many of which were found in contexts securely dated to the Iron Age albiet late Iron Age.

2. A blade based industry using a grey flint which has subsequently become patinated. The blades are irregular in shape with curved forms being common. Platforms are facetted, however, there seems to be little other thought given to preparation which has resulted in the irregular and varied form of these blades. Occasionally these blades are broken, suggesting that the whole collection of blades represents the waste products of manufacture.

In the absence of finished pieces or cores made on this material is it difficult to satisfactorarily date this part of the excavated assemblage. However, irregular blade production may indicate a Neolithic date which suggests *a degree of contemporaniety* between the two main flint assemblages. This is also suggested by the common occurence of the two assemblages together within pits and ditches.

The association of coarse flint work with Iron Age pottery indicates the presence of Iron Age knapping in the vicinity. Whilst excavations along the river valley within the parish of Hinxton have shown the presence of extensive Neolithic and Bronze Age activity in similar riverside zones and indicating that the flint artefacts are likley to cover a broad spectrum of periods and activities.

Catalogue of Exotics and burnt flint

Tr	Cut	Fill	Type	Description of lithics
13	95	94	Fill to ditch	Vesicular Basalt; lava quern fragment
14	40	18	IA dump in ditch	Vesicular Basalt; lava quern fragment
14	40	19	Upper fill to IA ditch	Red sandstone; two edges polished (by grinding action ?)
14	65	62	Uppr. fill to Pit	Burnt Flint
14	161	156	basal fill to Pit	Vesicular Basalt; very fragmentary. Burnt flint.
17		48	Pit unexcavated	Burnt flint
17		49	Pit unexcavated	Burnt flint
17	8	5	Final fill to late Saxon Pit	Vesicular Basalt; lava quern fragment
17	72	56	Fill to final riverside ditch	Red sandstone; slight burning
17	72	58	Fill to recut of riverside ditch	Burnt flint; very fragmentary
17	76	55	Fill to initial riverside boundary ditch	Burnt Flint

Catalogue of Lithic artefacts

Tr	Cut	Fill	Type	Description of lithics
All		1	Topsoil	2 x Core rejuvination flake. Endscraper. Unfinished arrowhead (leaf shaped) Neo ?. Side Scraper. Bi polar core. 16 x flakes, 1 x irregular blade.
14	40	17	Upper fill to IA ditch	2 x flakes
17	8	41	Lower fill to recut of late Saxon Pit.	1 x proximal end of blade. Late Meso
17		50	Pit unexcavated.	1 x flake.
14	52	51	fill to ditch	1 x flake
14	54	53	Fill to pit/post-hole.	1x flake
17	72	56	Fill to recut of riverside ditch	1 x irregular blade. 1 x flake
17		57	Pit unexcavated	1 x flake.
18	67	66	Fill of ditch	2 x flake.
5	83	81	Fill of ditch	Miscellaneous retouched piece; side/end scraper with spur.
14	85	84	Fill of ditch.	1 x blade. 2 x flake.
12	86	88	Fill of IA enclosure ditch	1 x flake.
13	95	93	Fill of ditch	4 x flake. one snapped, another has an irregular retouched notch on the distal end.
13	95	96	Fill of ditch	4 x flakes.
13	98	97	Fill of ditch	1 x flake.
13	139	138	Fill of ditch	1 x flake.
13	151	147	Fill of ditch	2 x flake.

APPENDIX C

Hinxton Riverside, Cambridgeshire- HINRIV98
Environmental Archaeology Assessment

Introduction

A sample of animal bone and the flots and sorts from three soil samples collected during an evaluation at Hinxton Riverside were submitted for assessment. A total of 339 bone fragments weighing approximately 4.37 kilograms were collected by hand during the excavation. The three samples each comprised 20 litres of sediment and were washed and floated by the Cambridgeshire C.C. Archaeological Field Unit. Flots were obtained from all three samples but only one sample produced any animal bone from the residue.

Animal bone

The animal bone was recorded directly onto an ACCESS database using the recording procedures routinely used by the Environmental Archaeology Consultancy (detailed in the Appendix) . The archive catalogue of this material is attached (Appendix). Bone fragments were identified by comparison with a modern reference collection of known species. The bones were recorded individually except where two or more fragments were sufficiently similar to be recorded under the same entry. Each record notes, context, species, bone element, number of fragments, left or right side, state of any epiphyseal fusion, presence of zones, evidence for butchery, evidence for gnawing, state of wear of the teeth, any measurements taken, any general descriptive comments and the preservation condition. These details are coded in 14 fields in the database, and the codes are given in the Appendix.

The bones are summarised below in Table 1 using the preliminary phasing available at the time of assessment.

Table 1: Bone fragments and partial skeletons recovered during hand excavation

period/context	IA	IA/Rom	Rom	Rom?	Rom/Sax	Sax	LSax	cont.45
Horse	4	1	1	3	3	2	2	1
Cattle	23	6	7	5	1	2	7	
Cattle size	11	5	4	9	8	3	13	
Sheep or goat	7	8	2	4	1	1	10	1
Sheep size	3	4	1	15	3	3	12	
Pig	7	2		5			3	
Dog	2*			2				
Cat							1	
Small animal							4	
Chicken	1						6**	
Chicken size			1					
Goose cf domestic		2						
Goose size		6						
Crow or Rook				1			3	
Indet.	1	4	1	5			4	
Oyster							1	
Total	59*	38	17	49	16	11	66**	2

*partial skeleton of a dog entered as 1; ** two partial skeletons of chicken entered as 2.

The preservation of the bone is on the whole good, although approximately 15% of the Iron Age material was classified as weathered with extensive surface erosion or root etching. The proportion of weathered and etched bone decreases as the material gets younger and the Late Saxon assemblages from pits 8 and 16 has nearly 25% of the fragments in very good condition with no evidence of erosion or root etching, and the remainder in good condition with only minimal surface etching. There is no evidence for loss of bones through erosion. Dogs have clearly been a destructive agency of the bones on site. Just over 10% of the bones in the collection (excepting the partial skeletons) show evidence of dog gnawing. This has destroyed the epiphyseal ends of a number of bones diminishing the information potential of a small part of the sample. There is a higher incidence of gnawing on the Iron Age sample (20%) than the later periods which may reflect the number of dogs on the settlement or the disposal behaviour.

Evidence for butchery is limited in the sample. Less than 5% of the bones (12 fragments) show visible cuts marks, and these show no evidence of being concentrated within any of the premliminary phases. Two bones had been charred, but no calcined (burnt) bones were recovered.

We can briefly consider the level of fragmentation in the assemblage. This has been assessed by considering the average number of zones (Rackham 1986; see Appendix) per fragment of the identification categories, cattle, cattle size, sheep or goat, sheep size and pig. In the Iron Age and Iron Age/Roman assemblages there are at least 1.1 zones per fragment in these categories. In those contexts assigned to the Roman or Saxon periods this index drops to less than 0.6 zones per fragment overall, indicating a significantly higher level of fragmentation in these contexts. This could be a taphonomic factor reflecting differences between ditches and pits, or changing patterns of disposal or butchery.

Apart from the crow or rook bones all the fragments derive from domestic species. Horse, cattle, sheep, pig, dog, cat, chicken and goose are present. Cattle and cattle size bone fragments dominate the sample but there is some indication that cattle may be more abundant in the Iron Age samples, than in later phases, and sheep fragments are more numerous than cattle in the Late Saxon pits.

There is a marked variation in the sizes of the horses at the site. Both small pony and horse sized animals are present. The Iron Age deposits contain only evidence of small ponies, while the Roman deposits have horses. Saxon contexts include both pony and horse sized animals. The smallest of these animals was a short limbed Iron Age pony no taller than the spanish donkey in the author's reference collection. A less dramatic variation in size is apparent for the cattle and sheep bones, but the samples do not permit recognition of changes through time.

Potential of the animal bone

The sample indicates that the bone buried at the site is in good condition. Although dog scavenging has affected the assemblage in general fragmentation is not severe and the fragments have a high information content, with a number being measurable and many including data relating to the age at death of the animals(see Appendix). Even this small sample appears to illustrates that patterns of variation exist between the periods, both in the taphonomy of the sample and its economic interpretation in the context of the site. The animal bone therefore has a high potential for contributing to an understanding of the economy of the site and its changes through time and may also contribute to an understanding of patterns of disposal, butchery or exploitation in the different periods of occupation. Whether this potential could be realised is largely dependent upon whether further work at the site is necessitated and the size of the sample generated by it. There is a strong case for ensuring that sufficient intrusive excavation of features, that will be destroyed during development, is undertaken to ensure recovery of a substantial animal bone assemblage.

Soil samples

Three samples were taken for assessment. One, <3>, derived from the Iron Age enclosure ditch [134], a second, <2>, from a Roman pit [141], and the third, <1>, from the late Saxon pit [8]. The environmental finds from these samples are summarised in Table 2. Recent plant rootlets were present in all the samples.

Table 2: General summary of the environmental finds from the soil samples

sampl no.	cont.	flot # vol. ml	char-coal*	charr'd grain*	charr'd seeds	unchar' seed*	snails *	bone *	comments
1	22	20	1	2	1	2	2	2	2 frog skeletons;
2	140	35	2	1		2	3		incl. small fish vert.
3	132	8	1	1		1	2		

*- abundance coded as 1=1-10; 2=11-100; 3=101-250 items or fragments.
#- all three flots included substantial small silt crumbs; the charcoal and charred component of all was substantially smaller than this volume suggests.

Iron Age enclosure ditch- [132], <3>
This sample was relatively poor in finds. A very few tiny fragments of charcoal were present, a single poorly preserved carbonised cereal grain, a single uncarbonised (probably contaminant) *Chenopodium* sp. seed, and a few snails including *Cecilioides acicula*, *Vallonia* sp., *Helicella* sp. and *Hygromia* sp. The burrowing snail *C. acicula* is the most common, but few if any of the shells need be contemporary with the deposit because of this species burrowing habit. The other species are not sufficiently abundant to make any comment upon the contemporary environment of the ditch. Although fine silt laminations in the base of this feature suggest waterlain sediments there is no evidence from the environmental remains to support a hypothesis that the ditch was water-filled. If it had been seasonally waterlogged one might have expected some aquatic or semi-aquatic mollusc species but none are present in the small sample of snails.

Roman pit - [140], <2>
This sample contained abundant recent rootlet material, and included one or two clearly modern contaminants such as a weevil thorax with its scales on, fragments of butterfly wing and moss. The sample was appreciably richer than the Iron Age sample. Small quantities of charcoal were present and although only one whole carbonised grain was recognised, a number of broken poorly preserved fragments appear to be present. A few uncarbonised seeds including blackberry are present but these are probably not contemporary with the deposit. Snails are relatively abundant and again *C.acicula* is the most common species. Other groups include *Hygromia* sp., *Vallonia* sp., *Pupilla muscorum* and *Oxychilus alliarus*. These again have limited potential for interpretation but may suggest a local grassland environment. A single small fish vertebra was recovered.

One or two very small fragments of coal are also present.

Late Saxon pit - [8],<1>
This was the richest of the three samples. Unlike the others a few bones were recovered from the residues and included parts of two frog or toad skeletons and a few unidentified fragments of mammal bone. The presence of some mineralised seeds, and a few fragments of mineralised invertebrate suggests that this feature may have contained cess material. A few comminuted charcoal fragments are present. Charred cereal grains, including wheat and oat and/or rye, are present but their preservation is poor and most of the grains will not be assignable to species. A single charred cotyledon of a pea or bean is also present. There is little evidence of non-crop seeds among the charred remains. Uncharred fragments of elder (*Sambucus* sp.) and rush (*Juncus* sp.), are present, but these may post-date the formation of the deposit. The snail assemblage is dominated by *C.acicula*, but other shells include *Vallonia* sp, *Punctum pygmaeum*, *Hygromia hispida* and a single shell of a planorbid, an aquatic species.

Potential of sampling
The samples taken during the evaluation of the site indicate that preservation of environmental evidence is likely to be limited to charred plant remains, mollusc shells, and perhaps, where features have contained cess, mineralised seed and insect fragments.

The molluscan remains have the potential for registering changes in the immediate environment of the site during the period represented by the archaeological deposits. None of these samples were particularly rich in snails but other contexts may prove suitable and if a sequence of samples can be obtained from a series of features, preferably those filling naturally such as ditches, from the different periods then any major changes in the local environment may be reflected in the molluscan samples. No other evidence, other than that of the sediments themselves, is likely to allow paleoenvironmental reconstruction.

Although the charred remains in the samples were in poor condition this evidence should permit study of the changing crop varieties used between the Iron Age and Late Saxon periods. The samples taken during the evaluation have no evidence for crop processing and the cereal and pulse remains probably derive from accidental

charring during food preparation or discard. Nevertheless if crop processing was taking place somewhere on the site then sampling of a variety of feature types across the site should pick up charred evidence of this activity.

APPENDIX

ARCHIVE CATALOGUE OF ANIMAL BONE FROM

HINXTON RIVERSIDE - HINRIV98

D.James Rackham
The Environmental Archaeology Consultancy

31 March 1998

THE ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY

Key to codes used in the cataloguing of animal bones

SPECIES

BOS	cattle
CSZ	cattle size
SUS	pig
OVCA	sheep or goat
OVI	sheep
SSZ	sheep size
EQU	horse
CER	red deer
CAN	dog
MAN	human
UNI	unknown
CHIK	chicken
GOOS	goose, dom
LEP	hare
UNB	indet bird
MALL	duck, dom.
GULL	gull sp.
FISH	fish
UNIB	bird indet
UNIF	fish indet
GSSZ	goose size
BEAV	beaver
CROK	crow or rook
BUZZ	buzzard
CKSZ	chicken size
FRTO	frog or toad

BONE

SKL	skull
TEMP	temporal
FRNT	frontal
PET	petrous
PAR	parietal
OCIP	occipital
ZYG	zygomatic
MAN	mandible
MAX	maxilla
ATL	atlas
AXI	axis
CEV	cervical vertebra
TRV	thoracic vertebra
LMV	lumbar vertebra
SAC	sacrum
CDV	caudal vertebra
SCP	scapula
HUM	humerus
RAD	radius
MTC	metacarpus
MC1-4	metacarpus 1-4
INN	innominate
ILM	ilium
PUB	pubis
ISH	ischium
FEM	femur
TIB	tibia
AST	astragalus
CAL	calcaneum
MTT	metatarsus
MT1-4	metatarsus 1-4
PH1	1st phalanx
PH2	2nd phalanx
PH3	3rd phalanx
LM1-LM3	Lower molar 1 - molar 3
UM1-UM3	upper molar 1 - molar 3
LPM1-LPM4	lower premolar 1-4
UPM1-UPM4	upper premolar 1-4
DLPM1-4	deciduous lower premolar 1-4
DUPM1-4	deciduous upper premolar 1-4
MNT	mandibular tooth
MXT	maxillary tooth
LBF	long bone
UNI	unidentified
STN	sternum
INC	incisor
TTH	indet. tooth
CMP	carpo-metacarpus

SIDE

W - whole
L - left side
R - right side
F - fragment

FUSION

Records the fused/unfused condition of the epiphyses
P - proximal; D - distal; E - acetabulum;
N - unfused; F - fused; C - cranial; A - posterior

TOOTH WEAR

- Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B.Wilson, C.Grigson and S.Payne (eds) *Ageing and sexing animal bones from Archaeological sites, 91-108.*

Teeth are labelled as follows in the tooth wear column:

h ldpm4/dupm4	f ldpm2/dupm2
H lpm4/upm4	g ldpm3/dupm3
I lm1/um1	
J lm2/um2	
K lm3/um3	

ZONES

- zones record the part of the bone present.
The key to each zone on each bone is on page 2

MEASUREMENTS - Any measurements are those listed in A.Von den Driesch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA

BUTCHERY - KN-knife cut; CH-chopped; B-burnt
GNAWING - DG-dog gnawed; RD-rodent gnawed

PRESERVATION
- 1 tooth enamel only surviving
- 2 very severe erosion and etching of bone,removing surfaces
- 3 substantial surface etching and weathering of bone, exfoliation or chalkyness
- 4 slight surface etching of bone, bone can be chalky indicating loss of organic component
- 5 bone in excellent condition with indications that some of the organic component still present, eg slightly translucent

ZONES - codes used to define zones on each bone

SKULL - 1. paraoccipital process
2. occipal condyle
3. intercornual protuberance
4. external acoustic meatus
5. frontal sinus
6. ectorbitale
7. entorbitale
8. temporal articular facet
9. facial tuber
0. infraorbital foramen

MANDIBLE
1. Symphyseal surface
2. diastema
3. lateral diastemal foramen
4. coronoid process
5. condylar process
6. angle
7. anterior dorsal acsending ramus posterior M3
8. mandibular foramen

VERTEBRA
1. spine
2. anterior epiphysis
3. posterior epiphysis
4. centrum
5. neural arch

SCAPULA
1. supraglenoid tubercle
2. glenoid cavity
3. origin of the distal spine
4. tuber of spine
5. posterior of neck with foramen
6. cranial angle of blade
7. caudal angle of blade

HUMERUS
1. head
2. greater tubercle
3. lesser tubercle
4. intertuberal groove
5. deltoid tuberosity
6. dorsal angle of olecranon fossa
7. capitulum
8. trochlea

RADIUS
1. medial half of proximal epiphysis
2. lateral half of proximal epiphysis
3. posterior proximal ulna scar and foramen
4. medial half of distal epiphysis
5. lateral half of distal epiphysis
6. distal shaft immediately above distal epiphysis

ULNA
1. olecranon tuberosity
2. trochlear notch- semilunaris
3. lateral coronoid process
4. distal epiphysis

METACARPUS -
1. medial facet of proximal artciulation, MC3
2. lateral facet of proximal articulation, MC4
3. medial distal condyle, MC3
4. lateral distal condyle, MC4
5. anterior distal groove and foramen
6. medial or lateral distal condyle

FIRST PHALANX
1. proximal epiphysis
2. distal articular facet

INNOMINATE
1. tuber coxae
2. tuber sacrale + scar
3. body of illium with dorso-medial foramen
4. iliopubic eminence
5. acetabular fossa
6. symphyseal branch of pubis
7. body of ischium
8. ischial tuberosity
9. depression for medial tendon of rectus femoris

FEMUR
1. head
2. trochanter major
3. trochanter minor
4. supracondyloid fossa
5. distal medial condyle
6. lateral distal condyle
7. distal trochlea
8. trochanter tertius

TIBIA
1. proximal medial condyle
2. proximal lateral condyle
3. intercondylar eminence
4. proximal posterior nutrient foramen
5. medial malleolus
6. lateral aspect of distal articulation
7. distal pre-epiphyseal portion of the diaphysis

CALCANEUM
1. calcaneal tuber
2. sustentaculum tali
3. processus anterior

METATARSUS
1. medial facet of proximal artciulation, MT3.
2. lateral facet of proximal articulation, MT4
3. medial distal condyle, MT3
4. lateral distal condyle, MT4
5. anterior distal groove and foramen
6. medial or lateral distal condyle

site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	3	BOS	MTC	1	R	DF	345		DG		SD-24.6 Bd-44.8 GL-170est	SHAFT AND DISTAL END-PROX CHEWED OFF-SMALL CATTLE	4
HINRIV98	3	BOS	ULN	1	F							MIDSHAFT FRAG	4
HINRIV98	3	EQU	ATL	1	W							PERIPHERAL DAMAGE-HORSE SIZE	4
HINRIV98	5	CSZ	RIB	1	F							MIDSHAFT FRAG	5
HINRIV98	5	OVCA	LM3	1	R					K10		POST CUSP BROKEN	4
HINRIV98	5	OVCA	SKL	1	F							FRONTAL FRAG WITH BASE HC- 3 PIECES	4
HINRIV98	7	BOS	ATL	1	F							POST FRAG	4
HINRIV98	7	BOS	MTT	1	L	DN	125		DG			PROX END AND SHAFT-DISTAL END CHEWED	4
HINRIV98	7	CSZ	HUM	1	R							DISTAL POSTERIOR SHAFT FRAG	4
HINRIV98	7	EQU	MTT	1	R	DF	12345				GL-267 Bp-53.6 SD-31.1 Bd-49.1	COMPLETE-HORSE	4
HINRIV98	7	OVCA	MTT	1	L		125		DG		SD-12.5	PROX END AND SHAFT-DISTAL END CHEWED OFF	5
HINRIV98	14	CHIK	MTC	1	L						GL-32.9	COMPLETE	4
HINRIV98	14	SMA	LBF	3	F							SHAFTS-AMPHIBIAN? OR JUVENILE	4
HINRIV98	14	SSZ	RIB	1	F							DISTAL END	4
HINRIV98	14	UNI	UNI	1	F							INDET	4
HINRIV98	17	BOS	SKL	1	L							ZYGOMATIC ARCH-WEATHERED	3
HINRIV98	17	BOS	SKL	1	R					g15h14I7		ZYGOMATIC AND MAXILLA-JUV-FRAGMENTED->14 PIECES	4
HINRIV98	17	BOS	TRV	1	F	CFAF	12345					DORSAL SPINE BROKEN	4
HINRIV98	17	CSZ	LBF	1	F				DG			SHAFT FRAG-PROB HORSE	4
HINRIV98	17	CSZ	LBF	1	F				DG			SHAFT FRAG	4
HINRIV98	17	CSZ	RIB	1	L							PROXIMAL SHAFT	4
HINRIV98	17	CSZ	TIB	1	R				DG			PROXIMAL SHAFT FRAG	4
HINRIV98	17	CSZ	UNI	2	F							INDET	4
HINRIV98	17	EQU	CEV	1	F	AF	234					CENTRUM AND ONE ZYGA- 2 PIECES-PONY SIZE	4
HINRIV98	17	EQU	MAN	1	R		123567 8			FGHIJK	7-152 15b-59.8 15c-94	MOST OF JAW-MALE- PIECES-SMALL PONY-TEETH MED-WELL WORN	4
HINRIV98	17	OVCA	FEM	1	L		4		DG			DISTAL SHAFT- 3 PIECES-DISTAL CHEWED	4
HINRIV98	17	OVCA	TIB	1	L	DN	47					SHAFT-GRACILE	4
HINRIV98	17	SSZ	LBF	1	F			B				CHARRED SHAFT FRAG	4
HINRIV98	17	SSZ	UNI	1	F							INDET	4
HINRIV98	17	SUS	TIB	1	L	DF	567				Bd-28.5 Dd-25	DISTAL END	4
HINRIV98	18	BOS	MAN	1	R		123					SYMPHYSEAL FRAG	4
HINRIV98	18	CSZ	SKL	1	F							DORSAL FRAG	4
HINRIV98	18	OVCA	TIB	1	L		4		DG			SHAFT-DISTAL END CHEWED	4
HINRIV98	19	BOS	CEV	1	F	CNAN	45					EPIS LOST-SPINE BROKEN-PERIPHERAL DAMAGE-SAME ANIMAL AS ABOVE	4
HINRIV98	19	BOS	CEV	1	F	CNAN	45					EPIS LOST-SPINE BROKEN-SAME ANIMAL AS BELOW	4
HINRIV98	19	BOS	INN	1	R	EF	45	CH				ACETAB-CHOPPED MEDIALLY THRU ANT ACET-IMM- 2 PIECES	4
HINRIV98	19	BOS	LMV	1	F	CNAN	145					CENTRUM- ARCH AND SPINE	4
HINRIV98	19	BOS	MAN	1	L		234578	KN?		FGH12I18J16	7-120 15a-72	3 PIECES-M3 WELL UP BUT LOST	4
HINRIV98	19	BOS	MTC	1	R				DG		SD-33.6	SHAFT-BROAD-BOTH ENDS CHEWED OFF	5
HINRIV98	19	BOS	MTC	1	R		12		DG		SD-28.3	PROX END AND SHAFT-BOTH ENDS CHEWED	5
site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	19	BOS	SKL	1	R		3					POST FRONTAL AND PARIETAL-SUTURES OPEN-CALF/JUV-POROUS-5 PIECES-BASE HORN CORE	4
HINRIV98	19	CSZ	LBF	1	F							SHAFT FRAG	4

site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	19	CSZ	TRV	1	F				DG			ANT FRAG BASE OF SPINE-CHEWED	4
HINRIV98	19	EQU	FEM	1	R		48				SD-31.3	SHAFT-POSS SL DOG CHEWING ON DISTAL END-2 PIECES-SHORT LIMBED PONY	5
HINRIV98	19	OVCA	MTT	1	F				DG			MIDSHAFT-SL CHEWING	4
HINRIV98	19	OVCA	MTT	1	L				DG		SD-9.3	SHAFT-BOTH ENDS CHEWED	4
HINRIV98	19	SUS	MAN	1	R		23					SYMPHYSEAL FRAG	4
HINRIV98	19	UNI	UNI	1	F							INDET	4
HINRIV98	22	BOS	MAN	1	F							LATERAL FRAG HORI RAMUS	4
HINRIV98	22	BOS	MAX	1	L					I15J14K10			5
HINRIV98	22	BOS	UM2	1	R					J14			5
HINRIV98	22	CHIK	HUM	1	R						GL-62.9	COMPLETE-PROB FROM SAME WING	5
HINRIV98	22	CHIK	SCP	1	R						GL-63.9	COMPLETE	5
HINRIV98	22	CHIK	SKEL	1	F							MOST OF ADULT CHICKEN LIMBS AND STERNUM AND LUMBOSACRALE-33 BONES-FEMALE	5
HINRIV98	22	CHIK	ULN	1	R						GL-61.6	COMPLETE	5
HINRIV98	22	CSZ	LBF	1	F							ARTICULAR FRAG	4
HINRIV98	22	CSZ	LBF	1	F			B				SHAFT FRAG-CHARRED	4
HINRIV98	22	CSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	22	CSZ	UNI	1	F							INDET-CF LBF	4
HINRIV98	22	FEL	HUM	1	F	PNDN						SHAFT-KITTEN	4
HINRIV98	22	FRTO	SKEL	2	F							PARTS OF TWO SKELETONS-LARGE SPECIMENS- S1	5
HINRIV98	22	OVCA	MTC	1	L	DN	125					SMALL-LAMB-PROX EPI UNFORMED	4
HINRIV98	22	OVCA	MTC	1	R		1					SPLIT FRAG PROX END	4
HINRIV98	22	SSZ	LBF	2	F							SHAFT FRAG- S1	4
HINRIV98	22	SSZ	LBF	3	F							SHAFT FRAGS	4
HINRIV98	22	SSZ	LBF	1	F				DG			SHAFT FRAG-CHEWED	4
HINRIV98	22	SSZ	LBF	1	F							SHAFT FRAG	5
HINRIV98	22	SSZ	RIB	1	F							MIDSHAFT	4
HINRIV98	22	UNI	UNI	3	F							INDET- S1	4
HINRIV98	22	UNI	UNI	3	F							INDET	4
HINRIV98	25	OVCA	RAD	1	R							PROX SHAFT FRAG	4
HINRIV98	27	BOS	PH2	1	L	PF	12					COMPLETE	4
HINRIV98	27	BOS	UM3	1	L					K6			4
HINRIV98	27	SUS	LI	1	L							SL WEAR	4
HINRIV98	27	UNI	UNI	1	F							INDET	4
HINRIV98	29	BOS	HC	1	F			CH				BASE HORN CORE-POROUS-JUV-CHOPPED FROM SKULL	4
HINRIV98	29	BOS	RAD	1	R							DISTAL MIDSHAFT FRAG	4
HINRIV98	29	CROK	MTT	1	L						GL-53.8 SC-3.4	COMPLETE-SL DAMAGE	4
HINRIV98	29	CROK	ULN	1	L						Bp-9.7 SD-4.5	PROX TIP BROKEN	5
HINRIV98	29	CROK	ULN	1	R						GL-76.1 Bp-9.5 SD-4.6	COMPLETE	5
HINRIV98	29	CSZ	FEM	1	F							SHAFT FRAG	5
HINRIV98	29	CSZ	LBF	2	F							SHAFT FRAG	4
HINRIV98	29	CSZ	TIB	1	L							PROX SHAFT FRAG	4
HINRIV98	29	CSZ	UNI	1	F							INDET	4
HINRIV98	29	CSZ	UNI	1	F				DG			INDET-CHEWED	4
HINRIV98	29	OVCA	CAL	1	R	PF	1		DG			PROX END-CHEWED	4
HINRIV98	29	OVCA	LM2	1	R					J13			4
HINRIV98	29	OVCA	LM3	1	L					K12			4
HINRIV98	29	OVCA	RAD	1	R		3					LAMB-VERY SMALL-NEONATAL PROX SHAFT	4
HINRIV98	29	OVCA	SCP	1	L		5					FRAG DISTAL CAUDAL MARGIN OF BLADE	4
HINRIV98	29	OYS	UV	1	F							FRAG	0

site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	29	SSZ	LBF	2	F							SHAFT FRAG	5
HINRIV98	29	SSZ	LBF	1	F				DG			SHAFT FRAG-CHEWED	4
HINRIV98	29	SSZ	RIB	1	R			CH	DG			PROX HALF SHAFT-PROX END CHEWED-SHAFT CHOPPED REPEATEDLY	4
HINRIV98	29	SSZ	RIB	1	L			CH				PROX END-CAPUT CHOPPED THRU	4
HINRIV98	29	SUS	MAX	1	R		0			dfgh11		FRAG WITH DEC PREMOLAR ROW-MOLAR 1 UP BUTLOST	4
HINRIV98	34	SUS	MAN	1	R		17			h14I9J6K2		HORIZONTAL RAMUS-6 PIECES-FEMALE-WEATHERED	3
HINRIV98	41	CHIK	SKEL	1	F							23 BONES-LIMBS-STERNUM AND RIB-ADULT FEMALE	4
HINRIV98	41	EQU	PHI	1	W	PF	12					COMPLETE-BUT PERIPHERAL DAMAGE-PONY SIZE	4
HINRIV98	41	SMA	UNI	1	F							INDET	5
HINRIV98	41	SUS	FEM	1	R		4	CH				DISTAL SHAFT-CHOPPED	4
HINRIV98	41	SUS	MAN	1	F		6					FRAG OF ANGLE	4
HINRIV98	43	BOS	MAN	1	F							VENTRAL FRAG HORIZONTAL RAMUS-WEATHERED	3
HINRIV98	43	BOS	TIB	1	L		4					PROX SHAFT FRAG-SMALLISH ANIMAL	4
HINRIV98	43	OVCA	MTC	1	F							MIDSHAFT-SMALL-GRACILE-WEATHERED	3
HINRIV98	45	EQU	MPL	1	F			CHKN				TIP BROKEN-CHOPPED FROM MTP-PROX CUT-POSS ABORTED NEEDLE	4
HINRIV98	45	OVCA	UM3	1	L					K11			4
HINRIV98	56	BOS	INN	1	L	EF	5					ACETAB AND ISCHIAL FRAG- 3 PIECES	4
HINRIV98	56	BOS	MAX	1	L		9					FRAG WITH ALVEOLI	4
HINRIV98	56	BOS	MTC	1	L	DF	345		DG		Bd-51.5	BIT PROX END-SHAFT AND DISTAL END-5 PIECES-PROX CHEWED SL	4
HINRIV98	56	CSZ	LBF	2	F							SHAFT FRAG	4
HINRIV98	56	CSZ	LBF	2	F							SHAFT FLAKES	5
HINRIV98	56	EQU	MTT	1	L		12				Bp-54.6	PROX END- 2PIECES-HORSE SIZE	4
HINRIV98	56	GOOS	MTT	1	L			KN				DISTAL HALF-CONDYLE WITH CUT MARKS	4
HINRIV98	56	GOOS	TIB	1	R						Bd-17.8	DISTAL END	4
HINRIV98	56	GSSZ	LBF	6	F							PROB GOOSE HUM	4
HINRIV98	56	OVCA	HUM	1	R	DF	6789				BT-31 HT-18.6	DISTAL HALF	4
HINRIV98	56	OVCA	MTT	1	L		2					SPLIT FRAG PROX END	4
HINRIV98	56	OVCA	RAD	1	L	PF	123	KN	DG			PROX END AND SHAFT-DISTAL CHEWED-KNIFE CUT AT PROX END-SAME LIMB AS BELOW	5
HINRIV98	56	OVCA	ULN	1	L		23		DG			SEMILUNARIS AND SHAFT-PROX END CHEWED OFF-SAME LIMB AS ABOVE	5
HINRIV98	56	SSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	56	SSZ	MTT	1	F							SHAFT FRAG-POROUS-JUV	4
HINRIV98	56	SSZ	RIB	1	F							SHAFT	5
HINRIV98	56	UNI	UNI	1	F							WEATHERED- 2 PIECES	3
HINRIV98	62	BOS	CQ	1	W		1		DG			SL CHEWED AND DAMAGED-SMALL ANIMAL	4
HINRIV98	62	CSZ	MAN	1	F							LATERAL FRAG HORI RAMUS	4
HINRIV98	62	OVCA	RAD	1	R		3					SPLIT MIDSHAFT	4
HINRIV98	63	SSZ	LBF	1	F							SMALL SHAFT FRAG	4
HINRIV98	66	BOS	LI	1	L							NO WEAR	4
HINRIV98	66	BOS	MTT	1	L		1					FRAG PROX END	4
HINRIV98	66	BOS	MTT	1	F							POST MIDSHAFT FRAG	4
HINRIV98	66	BOS	SCP	1	L							VENTRAL DISTAL BLADE FRAG	4
HINRIV98	66	CKSZ	RIB	1	W							SHAFT	5
HINRIV98	66	CSZ	LBF	1	F							SHAFT FRAG-PROB HORSE	4
HINRIV98	66	CSZ	RIB	1	L	PN	1					PROX END- 2 PIECES-POROUS	4
HINRIV98	78	CSZ	LBF	1	F							SHAFT FRAG-WEATHERED	3
HINRIV98	78	OVCA	RAD	1	L	PF	123		DG			PROX END AND SHAFT-SURFACE ETCHING-DISTAL CHEWED	3

HINRIV98	78	SUS	HUM	1	R	DN	69					DISTAL HALF SHAFT-SURFACE ETCHED	3
HINRIV98	81	SUS	MC3	1	L	DN	12					PROX END AND SHAFT-PIGLET	4
HINRIV98	84	CSZ	LBF	1	F							SHAFT FRAG-WEATHERED	3
HINRIV98	84	CSZ	UNI	1	F							INDET	4
HINRIV98	84	CSZ	UNI	4	F							INDET	4
HINRIV98	84	CSZ	UNI	2	F							INDET	4
HINRIV98	84	EQU	MAN	1	F					JK		FRAG LATERAL HORI RAMUS AND M2 AND 3-MED-WELL WORN-3 PIECES	4
HINRIV98	84	EQU	MPL	1	W							LATERAL METAPODIAL-2 PIECES	4
HINRIV98	84	EQU	SCP	1	L							FRAG CAUDAL MARGIN OF DISTAL BLADE	4
HINRIV98	84	OVCA	RAD	1	F							MIDSHAFT FRAG	4
HINRIV98	84	SSZ	LBF	2	F							SHAFT FRAG-WEATHERED	3
HINRIV98	88	BOS	INN	1	L		2		DG			ILIAL FRAG WITH SCAR-ANTERIOR END CHEWED	4
HINRIV98	88	CSZ	INN	1	F							2 PIECES-WEATHERED	3
HINRIV98	88	SUS	MAN	1	R		678					POSTERIOR VENTRAL ANGLE-WEATHERED	3
HINRIV98	91	BOS	ATL	1	F							MOST OF RIGHT SIDE AND CENTRUM	4
HINRIV98	91	BOS	MAN	1	F							VENTRAL FRAG HORIZONTAL RAMUS	4
HINRIV98	91	EQU	INN	1	R		2					ANTERIOR ILIUM-2 PIECES-WEATHERED	3
HINRIV98	93	OVCA	TIB	1	R		47					SHAFT-GRACILE-BOTH ENDS BROKEN-DISTAL POSS CHEWED	4
HINRIV98	93	SSZ	LBF	2	F							SHAFT FRAG	4
HINRIV98	93	SSZ	RAD	1	F							MIDSHAFT FRAG	4
HINRIV98	94	BOS	UM2	1	L					J15			4
HINRIV98	94	BOS	UM3	1	L					K15		WELL WORN	4
HINRIV98	94	CSZ	SKL	1	F							BOTH SIDES VENTRAL FRAG	4
HINRIV98	94	CSZ	UNI	2	F							INDET-WEATHERED	3
HINRIV98	94	EQU	FEM	1	R	DF	4567					DISTAL END-LARGE PONY-WEATHERED AND SEVERELY ROOT ETCHED	3
HINRIV98	94	EQU	TIB	1	R	DF	4567				SD-29	SHAFT AND PART DISTAL END-SMALL PONY-WEATHERED	3
HINRIV98	125	BOS	SKL	1	F							FRONTAL FRAG WITH BASE HORN CORE-12 PIECES	4
HINRIV98	125	BOS	TIB	1	L		4					PROX SHAFT	4
HINRIV98	125	CHIK	RIB	1	F							SHAFT	4
HINRIV98	125	OVCA	MTT	1	L	DN	125					PROX END AND SHAFT	4
HINRIV98	125	SSZ	RIB	1	F							SHAFT FRAG	4
site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	125	SUS	LPM	1	F							SPLIT CUSP	4
HINRIV98	125	SUS	TIB	1	R	PN			DG			PROX SHAFT-PROX CHEWED	4
HINRIV98	126	BOS	MAN	1	L		12367			h19I15JK7	15a-65.7	HORI RAMUS-M3 ONLY JUST UP-SL WEATHERED	3
HINRIV98	126	BOS	PHI	1	R		2					DISTAL END-PROX BROEKN OFF	4
HINRIV98	129	BOS	INN	1	L	EF	459					ACETABULUM-FEMALE-3 PIECES-POSS PATHOLOGY	4
HINRIV98	129	CAN	MAX	1	L		0					FRAG WITH CARNASSIAL-WEATHERED	3
HINRIV98	130	CROK	HUM	1	L							BOTH ENDS DAMAGED-SL POROUS-JUV?	4
HINRIV98	135	BOS	LMI	1	R					I16			4
HINRIV98	135	SSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	138	CSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	147	CSZ	HUM	1	F	DF	7					DISTAL CONDYLE FRAG	4
HINRIV98	147	CSZ	TIB	1	L				DG			PROX SHAFT FRAG-PROX END CHEWED	4
HINRIV98	147	EQU	MPL	1	W							LATERAL METAPODIAL-2 PIECES-WEATHERED	3
HINRIV98	147	EQU	MTP	1	F							SPLIT PROX END-WEATHERED	3
HINRIV98	147	SSZ	LBF	4	F							SHAFT FRAGS	4
HINRIV98	147	SSZ	RIB	1	F							SHAFT FRAG	4
HINRIV98	154	BOS	HUM	1	F		0					MIDSHAFT FRAG	4
HINRIV98	154	CSZ	LBF	1	F				DG			SHAFT FRAG-CHEWED	4

HINRIV98	154	CSZ	MAN	1	F							POST FRAG	4
HINRIV98	154	OVCA	FEM	1	F							SPLIT MIDSHAFT	4
HINRIV98	154	OVCA	MAN	1	L		75					DORSAL ANT FRAG ASCENDING RAMUS	4
HINRIV98	154	SSZ	RIB	1	F			CH				SHAFT-END CHOPPED	4
HINRIV98	154	UNI	UNI	1	F				DG			INDET	3
HINRIV98	155	BOS	MTT	1	F							SPLIT PROX SHAFT-PROX CHEWED-WEATHERED	5
HINRIV98	155	BOS	RAD	1	R		3					PROX SHAFT FRAG	4
HINRIV98	155	BOS	SCP	1	L	DF	123				GLP-64.1	DISTAL END-GLENOID AND NECK	4
HINRIV98	155	BOS	SCP	1	L	DF	12					PART OF GLENOID AND NECK	4
HINRIV98	155	CAN	SKL	1	F		48					ZYGOMATIC AND BASIOCCIPITAL- 3PIECES	4
HINRIV98	155	CAN	TRV	1	W	CFAF	12345					PERIPHERAL DAMAGE- 2 PIECES	4
HINRIV98	155	CSZ	LBF	3	F							SHAFT FRAG	3
HINRIV98	155	CSZ	RIB	1	F							SHAFT FRAG-WEATHERED	4
HINRIV98	155	CSZ	SKL	1	F							FRAG	4
HINRIV98	155	EQU	PHI	1	F	PF	1					SPLIT PROX HALF	4
HINRIV98	155	OVCA	INN	1	L	EF	23459					ILIUM+PART ISCHIUM-EPI RECENTLY CLOSED-IMM-SMALL- 2 PIECES	4
HINRIV98	155	OVCA	UM2	1	L					J11			4
HINRIV98	155	SSZ	HUM	1	F							DISTAL MIDSHAFT FRAG	4
HINRIV98	155	SSZ	INN	1	F							ILIAL SHAFT FRAG	4
HINRIV98	155	SSZ	LBF	4	F							SHAFT FRAG	4
HINRIV98	155	SSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	155	SSZ	RIB	1	L	PN						SHAFT-POSS CHOPPED THRU CAPUT	4
HINRIV98	155	SSZ	UNI	1	F							INDET	4
HINRIV98	155	SUS	FIB	1	F			CH				SHAFT-DIST CHOPPED	4
HINRIV98	155	SUS	SKL	1	R		567	KN		I18J13K8	M3-28.7	FRNT+ZYG+MAX-M1 NEARLY WORN TO ROOTS-CUT ON DORSAL FRONTAL	4
HINRIV98	155	UNI	UNI	5	F							INDET FRAGS	4
HINRIV98	156	BOS	MAN	1	F							VENTRAL FRAG HORIZONTAL RAMUS	4
site	cont.	species	bone	no	side	fusion	zone	butch'y	gnaw'g	toothwear	measurement	comment	pres-erv'n
HINRIV98	156	OVCA	RAD	1	L	PF	1					SPLIT PROX END	4
HINRIV98	156	SSZ	LBF	1	F							SHAFT FRAG	4
HINRIV98	156	SUS	MAX	1	F							FRAG WITH ALVEOLI	4
HINRIV98	158	OVCA	RAD	1	R		3					PROX SHAFT FRAG	4
HINRIV98	158	SUS	MT5	1	R	DN	12					PROX END AND SHAFT	4
HINRIV98	158	UNI	UNI	2	F							INDET	4

Cambridgeshire
County Council

Archaeology

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