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SCB 2161.19

EXCAVATIONS AT VICAR'S FARM WEST CAMBRIDGE

Final Publication Text

Gavin Lucas

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FORWARD AND ACKNOWLEDGEMENTS (with C. Evans)

After practising developer-funded fieldwork for over a decade - much, though happily not all, determined by baseline economics - it is certainly a pleasure to be able to announce a project that aspired to be 'more'. The results represent a unique level of collaboration. Under the auspices of Michael Bienias and Stephen Fallon (and subsequently Peter Taylor), the University of Cambridge's Estates Management and Building Services acted in a most responsible manner throughout and, from the outset, gracefully shouldered the burden of significant archaeology and went on to voluntarily adopt an exemplary archaeological Master Plan for the West Cambridge development as a whole. In this regard, thanks must also go to the archaeological consultant, John Walker, and the on-site contractors, Thorey and May Gurney. Here, in tandem, the ready co-operation and innovative response of the Development Control Archaeologists, particularly Simon Kaner, of the Library and Heritage Section of Cambridgeshire County Council made for a positive partnership, and this is equally true of the City's planners. Beyond this, as one of the development's major tenants, Microsoft Research Ltd generously made available an additional grant allowing us to fully computerise its record; its analytical 'fruits' have been born out many times over (benefiting from the advice of D. Powesland). In this regard, the support of Prof. D. McAuley, then Assistant Director of that organisation in Cambridge, is gratefully acknowledged. Finally, our debt to the University's Office of the Vice-Chancellor for making available a special grant towards a Schools' Visits week and site open day is great. Each separately attracted almost a thousand visitors, and it was entirely an inspiring exercise - with adequate preparation and appropriate infrastructure - to be able to host these varied 'guests'. Not only did this draw school children, families and many academics to the site, but also much of the 'old guard' of Cambridge's archaeology. It is indeed a rare pleasure when a site can become an event. We therefore thank John Carman of the Dept. of Archaeology for co-ordinating these ventures and organising the display materials, and the assistance of the University's Press and Publications Office - particularly, Alison McFarquhar and the graphic skills of Mark Mniszko - proved crucial.

Putting the Vicar's Farm excavations into some sense of perspective is difficult considering that a site almost half the size of Roman Cambridge was so competently excavated in the course of only four and a half months. While by its scale it challenges precepts of 'town'/hinterland interrelationships, it must also be set in the context of the Cambridge Archaeological Unit's West Cambridge Hinterland research programme. Only really initiated in the aftermath of the large-scale excavations at New Hall in 1993/94, thereafter there have been the discoveries of the 'great' Iron Age enclosure at Marion's Close off Huntingdon Road and the Roman extra-mural settlement at Burrell's Walk. Beyond this, there have been many equally relevant, negative result exercises (i.e. documenting where early settlement was not), and new Iron Age and Early Roman settlements have even been discovered through further evaluation fieldwork at the western end of the larger West Cambridge development site since the completion of the Vicar's Farm excavations. A rapidly changing 'field' of research, the end result will - largely because of the inspired guardianship of the University (and its many parts) and the long-term commitment by all parties - be

that the broader West Cambridge investigations will produce amongst the most nuanced and thorough understandings of a town's hinterland in Britain.

Finally, there seems an appropriate dynamic in the project, making us re-think, as it does, town/hinterland connections within the Roman landscape. The University's entire West Cambridge initiative will, ultimately, re-cast the 'central gravity' of both that institution and the City in general. Destined, as the site is to become a cross-roads of international research, that amongst the many facets of its Roman occupation was as a meeting place/market seems a case of serendipity.

Aside from sterling work of the fieldteam - often under very adverse (and soggy) conditions - Norma Challands processed the site's finds with great efficiency and Paul Whittaker's participation as co-Director must be singled out. The CAU are particularly grateful to the creative participation of all specialists

Chapter 1. Introduction

The History of Archaeological Work in the Area

The archaeology of Roman Cambridge and the region has for a long time been poorly represented in the published literature and by default, has contributed little to Roman studies in Britain. This situation is slowly changing – excavations within the Roman town since the 1950s have recently been published (Alexander & Pullinger 1999), and the growth in developer-led projects since the 1990s in and around the town and the region has produced a number of important Roman sites which should see publication in the forthcoming years. Excavations just outside the western gate of the town at New Hall in 1994, were the first to demonstrate the potential of extra-mural settlement (Evans 1996). Subsequently, on the eastern side, the discovery of an extensive inhumation cemetery on Jesus Lane revealed how much more, the urban hinterland of the town still has to offer (Alexander 2001). Even within the town, pockets of preserved, deep stratigraphy still survive much against expectations, as was recently shown at the Chesterton Lane sewer shaft (Mortimer & Regan 2001). In the broader region, while a number of Roman sites have been excavated in advance of development, it is particularly those along the southern fen edge, which stand out. Adding to the seminal work of the Haddenham Research Project undertaken in the 1980s (Evans & Hodder, forthcoming), excavations of the massive Roman settlement and industrial complex at Earith are possibly the most important in the entire county and will undoubtedly alter our perception of the Roman landscape in the region (Regan, forthcoming). Within the coming years, this region should therefore see the publication of several important sites and the volume offered here is just the first of these.

The archaeology of the western hinterland of Roman Cambridge where the site of Vicar's Farm lies, has already been summarised in various grey reports (Alexander 1996; Dickens 1999b); however, it is worth appraising the material again, especially in the light of the excavations at Vicar's Farm. Prehistoric activity in the form of flint scatters is known from the area of Gravel Hill to the north between the Madingley and Huntingdon Roads. Unfortunately, their precise provenancing is not always clear as these finds were retrieved during coprolite quarrying, but a range of flint tools from the Palaeolithic to the Bronze Age suggest sporadic activity and visitation (Marr & Burkitt 1923). Iron Age activity is attested to in the area of the present Hoyle Building (Astrophysics laboratory)[1]; during the construction of the building in 1909, sherds of fineware were recovered (CUMAA[2] accession no. 1944.131), which are confusingly described as Early Iron Age, yet wheelmade. Recent evaluation by the side of the Hoyle building found only evidence for nineteenth century quarrying and terracing, but Early and later Iron Age pottery occurred in the redeposited layers (Masser 2000). It is the Roman sites however that are more significant in terms of the present volume, and which fall into two more or less discrete groups: one sited just outside the southern gate of the Roman town along Akeman Street, the other about a kilometre to the west on the chalk and gravel ridge, between the Madingley and Huntingdon Roads. The first group, closest to the town incorporates many find spots, but with a main site possibly centred on Lady Margaret Road. The second group also

[1] TL 431 594
[2] Cambridge University Museum of Anthropology and Archaeology

includes many different find spots but centred in the area between the Observatory and the University Farms on Madingley Rise (Figure 1.1).

The Southern Town Gate: Lady Margaret Road

Closest to the town and along the line of Akeman Street are several find spots of Roman pottery and associated features centred around Lady Margaret Road (Fox 1923: 242; Macalister 1894). The main site was discovered during the excavation of foundation trenches for a house (*Barrmore*[3]) where over a thousand sherds of pottery, oyster shell and much animal bone (mostly sheep and cow, with some pig, horse and dog) is reported to have been found (Macalister 1894: 29-30). It is very difficult to assess the date of these finds, but from the description the mention of platters, small cups and amphorae would suggest the group is 1st/2nd century. Samian is also mentioned as fairly frequent (one with a makers stamp CALVVS) along with 2nd and 3rd century coins. It may be however, that continuous Roman occupation is present on the site, as some of the descriptions equally match later Roman wares and an elongated folded beaker illustrated in Fox (1923; Plate XXVI, no.4; CUMAA AR 1909.102) from the same area is not likely to be earlier than the 4th century. Further study of the finds would elucidate this, but unfortunately there are no records of this material in the CUMAA catalogue. Ditches and other features were also noted, including a possible kiln or oven (Macalister 1894: 31).

Chance finds of pottery and coins seem to have come from adjacent properties *Elterholm*[4], *Torrisdale*[5] and *Castle Knott*[6] (Macalister 1894), and from works along Madingley Road[7] (Macalister 1893; Alexander unpubl.), all of which may be part of the same settlement. Freeman collected quantities of Roman pottery in 1895 from 'the south side of Madingley Road', including from Lady Selby's House (CUMAA var.). At Castle Knott the finds included four burials (two males, a female and a child), while at Madingley Road Iron Age pottery has been found including Butt Beaker (Fox 1923: 91). In 1952 a substantial group of 1st century AD pottery was collected from the corner of Mount Pleasant and Lady Margaret Road by Mrs Baker (CUMAA 1952.434)[8]. Further Roman finds have also been retrieved from St. Johns Playing Fields on the site of the Saxon cemetery *c.* 250m to the south, including pottery, pierced coins and brooches (Fox 1923: 242). Much of this, particularly the brooches and coins, is probably Saxon re-use of Roman objects, but the presence of Roman pottery might suggest this area lay within the margins of the same site on Lady Margaret Road. Archaeological evaluation work in 1991 found traces of a Roman field system and pottery dating to the 2nd century (Evans 1991a & b). These scant details suggest this may be a fairly extensive extra-mural settlement just outside the southern town gate, perhaps comparable to New Hall and, if industrial, the possible kiln at *Barrmore* is very suggestive of a pottery works.

Another site on the edge of the town is marked as the location of burials and 'rubbish pits' with 1st/2nd century pottery, recorded in the 1930s at St. Edmunds College

[3] Browne 1974; 1/16
[4] Browne 1974; 1/42
[5] Browne 1974; 1/44
[6] Browne 1974; 1/17
[7] Browne 1974; 1/35, 39 & 40
[8] Browne 1974; 1/15

(RCHM 1959: lxi)[9]; it would seem too far away from the Lady Margaret Road site to be associated with it, although given the possible new road alignment (see below), it could be associated with further extra-mural settlement by the western gate to the Roman town (Evans 1995). Unfortunately, archaeological evaluation work in the College in 1996 found no traces of the expected Roman settlement except one isolated and undated burial, and a low density background scatter of 2nd-4th century Roman pottery (Dickens 1996).

The Western Hinterland: Madingley Rise

The second group to the west is more dispersed and includes various find spots, none with much detail, but largely deriving from coprolite or gravel quarrying in the area known as Gravel Hill, after Gravel Hill Farm (now University Farms) (Babington 1883). Late third century Roman coins (Gallienus, Tetricus I and Carausius) with pottery and bronzes are recorded from the area[10], and pottery (including a jar and two flagons) were found near the Observatory by A. F. G. Griffith in 1878[11] (Babington 1883: 36; CUMAA 1934.866C). The only known *in situ* remains are the two coffins found just to the north in 1863[12]. A male and female each occupied a coffin made from Barnack stone and with lids; the female had grave goods placed at the feet, which included glass bottles, jet jewellery and a 4th century beaker suggesting a very late date, but one quite consistent with the burial pattern (Babington 1864; Babington 1883: 35-6; Liversidge 1977: 15-16)[13]. More recently, during foundation construction for the BP Institute behind the Bullard laboratories on Madingley Rise in 2000, several cut features were noted, although unfortunately no further details are available (S. Boreham, pers. comm.). It is possible Roman features lie in this area – the projected New Hall route would have run straight through the site. Furthermore, Roman pottery has recently been found adjacent to Trinity Conduit Head (Sylvia Lachmann, pers. comm.), and begs the question of whether this spring may have been active in the Roman period. The locations of all these remains do appear more or less clustered in an area of *c.* 200m radius centred on the University Farms, and while they would appear to be perhaps an isolated settlement, this must be appraised in the light of a possible Roman Road recently postulated which would pass through this zone (Evans 1996).

This route, arguably corresponding with Margary's no. 231 to St. Neots, is suggested to have been established as the primary route to Cambridge in the first century, only later supplanted by the Huntingdon Road route in the 2nd century (Evans 1996: 94-99). Two possible burial sites are recorded along the line of the Huntingdon Road or *Via Devana* that leads to Godmanchester, including a small cremation cemetery found in 1861 and a possible barrow (Babington 1883: 35-6; Lysons & Lysons 1808; Liversidge 1977: 15), both of which are likely to be early in contrast to the coffin burials on Gravel Hill (but see note 12). This evidence might seem to contradict

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[9] Browne 1974; 1/23

[10] Browne 1974; 10/34 (TL 433 597 OR 430 597)

[11] Browne 1974; 10/38 (TL 433 595)

[12] Browne 1974; 10/29 (TL 431 598); There is some confusion here over the location of these coffins; Babington's description notes them explicitly at right angles to the *Via Devana*, which he is unlikely to have done if the road was not close by, but Browne's map, presumably after OS maps, locates these burials midway between Huntingdon and Madingley Roads.

[13] This material is now at the Fitzwilliam Museum, Cambridge.

Evans' interpretation of the chronology of the western routes into Cambridge, yet without further investigation, this issue will remain ambiguous. The usual interpretation for the St. Neots route is that it runs more or less along the Madingley Road (e.g. see Liller 1966), but this is unlikely as none of the alignments at Vicar's Farm would suggest this – in fact if anything Vicar's Farm would seem to lie some distance from any major route. Given the high ground on Gravel Hill and the associated Roman remains, a route across this ridge would seem the more plausible – whether or not the section found at New Hall corresponds to this route. Certainly, no road line was seen by Liller in the 1950s when a sewer trench was dug between the Observatory and Madingley Road (Liller 1966), and the same was true of the recent pipe trench from the Hoyle Building extension to Madingley Road. Evans' proposed route would run north of both these points (1996).

Apart from this group, Baron Von Hugel Anatole also collected several Roman vessels by Huntingdon Road from Gravel Hill farm in 1885, much of it 1st/2nd century including Colchester mortaria, colour-coat beakers, and a carinated bowl (CUMAA var.). Its precise location is unknown but the implication is that it is associated with Huntingdon Road rather than the Madingley Rise group. Similarly, a small assemblage of Roman pottery including samian was noted by John Bromwich near the Ascension Parish burial ground[14], which also lies closer to the Huntingdon Road and is probably unrelated to the Madingley Rise group.

Discussion

All this background information now has to be seen in the light of the major site at Vicar's Farm. The siting of the Roman settlement at Vicar's Farm and before that, sporadic prehistoric occupation or activity, raises some interesting issues of relationship between environment and landscape. In following convention and, in effect introducing the archaeology through its setting, one may be in danger of maintaining an environmental or geographical determinism. Yet, the question of specific locale needs raising, and it is one that both a broad landscape approach and a specific environmental reconstruction may answer together. To understand the site and its 'sense of place' requires equally envisaging the particularity of its environment as well as its location within its cultural geography.

Topographically, the site lies on the slope down from Madingley Rise, and is possibly even connected geologically to this gravel ridge as its southernmost tip. Perhaps more relevant however is the wet ground conditions along the line of the Willows Ditch. It is feasible that the Medieval ditch marks a much older (possibly canalized) stream course and it is clear from the geology that it follows the course of least resistance, i.e. through the sand and gravels. The source of the flow may be traced up to Trinity Conduit Head, a Medieval wellspring tapped in the 14th century and leading water to Trinity College via a buried aquaduct. The line of this aquaduct was traced in the excavation, represented by a lead pipe laid *c.* 2m below the surface; it is perhaps no coincidence that the pipe runs parallel and just to the north of the Willows Ditch.

While documentary sources place both the Willows Ditch and Trinity Conduit only as far back as the 14th century (RCHM 1959: 233), if the course of the ditch may be

[14] Browne 1974; 10/33 (TL 436 598)

earlier, so may the wellspring. The presence of Roman pottery and abundant oyster shell (see above) supports the idea of Roman presence around the springhead[15]. While at present a tantalizing theory, the possible presence of a Roman spring just north of the site which may even have fed a stream running into the site, does provide a potentially important context for understanding the site's placement. The common religious associations with springs is well documented archaeologically in Roman Britain, and given the religious components to the Vicar's Farm Roman settlement, is all the more suggestive. Archaeological investigation around Trinity Conduit Head would certainly help to develop this idea, but at present it is something about which we can only speculate.

Otherwise, the other potential occupation material and burials on Madingley Rise discussed above point to further settlement activity on the higher ground; quite how this relates to the Vicar's Farm settlement is hard to determine, knowing so little about it, but its proximity to the possible Roman Road might suggest it is of a very different nature.

Background the Project

The excavations at Vicar's Farm which lies c. 1km outside the Roman town of Cambridge were initiated as part of a major re-development programme by the University of the West Cambridge area. The project was commissioned by the University of Cambridge Estates Management and Buildings Service (EMBS) in advance of a Computing Science Block development. Representing the first significant archaeological investigation in conjunction with the University's West Cambridge development (Alexander 1996), it forms a major study of the Roman town's hinterland.

The site lies on the western edge of Cambridge (TL 43119/59060), covering over 6 hectares, and originally divided into two fields; a small northern one previously used as pasture, and a larger field to the south for wheat cropping. (Figure 1.2). The potential of the site was first revealed during a programme of geological test pitting in 1998 which was undertaken across much of the University's West Cambridge site and that was subject to archaeological monitoring (Dickens 1999a). Archaeological features were identified within three of the twelve test pits situated within the Vicar's Farm site, although no dating evidence was found associated with these. Moreover, background research and previous fieldwork in the immediate area did not suggest anything earlier than Medieval land use (see below). Given the ambiguity of the evidence, it was decided to undertake a field evaluation of the area in September 1999, consisting of thirteen trenches spaced across the two fields and comprising a total length of *c.* 650m (an area of 1764sqm). Archaeological features were found in every trench across the site of Bronze Age, Roman and Post-Medieval date, while in addition, Mesolithic, Neolithic and Medieval artefacts were also retrieved. The vast majority of the site's finds and features however related to the Roman period, and suggested a major settlement with its core clearly within the proposed development area (Whittaker & Evans 1999). It was at this point that it became clear that a major

[15] In fact there are multiple springheads in the same area, all bubbling up water, which Trinity Conduit Head has channelled together to feed its aquaduct (Lachmann, pers. comm.).

excavation would be required if the development was to proceed and so between December 1999 and May 2000, the whole area was stripped of topsoil and all archaeological features recorded and sample excavated, followed by an intensive watching brief of the area under the modern farmyard and the northern part of the bund in June and early July of the same year.

Methodology

Fieldwalking

Prior to machining, four 50m x 50m sample squares were fieldwalked (A-D), each sub-divided into 25, 10m grid squares. The conditions were not optimal for surface pick-up given the clayey nature of the soil, but sufficient finds were recovered to enable a basic appraisal. A range of artefacts were retrieved, a great deal of which were modern or Post-Medieval in date. Presented in Figures 1.3-4 are solely the plots of prehistoric worked flint and Roman pottery, both showing greatest densities in Square A. Numbers refer to individual pieces/sherds and in both cases are graded according to less than/equal to the mean ($\leq\mu$), up to one standard deviation (1σ) and greater than/equal to two standard deviations ($\geq 2\sigma$). This confirmed the findings of the evaluation trenches, which indicated the core of activity lay in this general area. Beyond this, the fieldwalking data might provide some useful comparative measure in terms of core-periphery densities on clay soils. For the Roman pottery, squares A and B were selected and their basic population statistics compared (Table 1.1); the figures are small but indicate that towards the core of a settlement, an average of 2 sherds per 10m square might be expected against 1 sherd every 5 squares in peripheral areas. The numbers in the actual core, which lies just to the north of A, may be even higher, although this area was not fieldwalked. All in all however, these numbers seem remarkably low for what was subsequently encountered beneath the topsoil in terms of the density of features, a fact explained, perhaps, by the poor conditions and clay soil.

Excavation

Excavation began in December 1999 with a small area opened up in the core of the site, which was expanded to cover the whole field in late January and February the following year. Machining of the topsoil took place under archaeological supervision with two to three, tracked 360° mechanical excavators working together at any one time loading spoil into dumper trucks. The ground conditions were at times very wet and consequently deep rutting obscured and disturbed the archaeology along their access route, although nothing major was lost. Base-planning and intensive metal-detector surveys were conducted in the wake of machining, and over selected areas, geophysical (magnetic susceptibility) and geochemical (phosphate) surveys were additionally carried out (see Challands and Middleton, this volume). During the main excavation (December 1999 - May 2000), all pre-modern features were either fully, or sample excavated; of the latter, 50% in the case of discrete features through half-sectioning and as far as possible, standard 1m slots at regular intervals for linear features. This procedure was compromised to the extent that slots at intersections between features were also required to resolve stratigraphic relationships. During the

watching brief phase (June- July 2000), excavation was more strategic and focused where possible on resolving major elements in this part of the site (Figure 1.5).

All retrieved finds were retained, although in the case of large pieces of unworked stone only a sample was kept with a record (numbers, weight) of the discarded material made. Bulk environmental samples (15-20 litres) were taken from all major features and additionally, column samples for pollen and micromorphology were taken from selected contexts. The Unit modified version of the Museum of London recording system was employed throughout to record the archaeology found within the open area (Spence 1990). A three-tier hierarchy of context, feature and group was employed in the excavation and post-excavation process. Contexts represented the basic unit of excavation (e.g. deposit, cut), their numbers indicated by square brackets (e.g. [001]). Features comprise the broader entity of which contexts were a part (e.g. ditch, posthole), and numbers were prefixed with an F. Finally groups represent a collection of interrelated features (e.g. enclosure, structure, cemetery), their number prefixed with a G. While groups were frequently identified in the course of excavation, their full ascription and designation was applied in the post-excavation stage – but by default rather then by design.

Sections were drawn at 1:10, base-plans variously at 1:200, 1:100, 1:50 and 1:20 depending on the density of features. A full photographic archive was also made using black and white negative, colour positive and digital images. All finds were catalogued by generic material (e.g. bone, pot) by context and indicated by arrow brackets (e.g. <001>); small finds were also assigned a separate number and located either by context position or x/y co-ordinates within the site grid. In total, of all phases of work, over 3,450 units were excavated and recorded, over 300 samples collected and over 39,000 finds retrieved. One of the major goals of this project was to integrate the recording system with a GIS package (ArcView) in order to facilitate the analysis and interpretation of the site, and most of the spatial analysis was conducted in this manner. To this end, all the excavation slots were assigned a number in post-excavation programme and apart from the finds recovered through metal detector survey which were plotted by the EDM, all finds are located to their excavation slot.

Public and Computing Initatives (with C. Evans)

The scale of the excavations provided scope for a series of initiatives allowing us to explore different facets of fieldwork and presentation. The most prominent was a 'Schools' Visits' week. Funded through a special grant from the Office of the University's Vice-Chancellor, this allowed us to, in effect, halt the fieldwork for a week and give the time to schools' tours. Under the co-ordination of Dr. John Carman accompanying brochures were distributed to all visitors and throughout the neighborhood, and educational/finds displays were mounted in the Old GPO building still standing on the site.

The timing of this programme coincided with the University's National Science week events and on its first Saturday the site was made open to the public at large, with live video relays to the McDonald Institute in the centre of town where there were also related displays. Each event - the open-day and schools' visits - attracted upwards of a 1,000 visitors, and both proved gratifying experiences. Further commemorating the

excavations, a large permanent signboard outlining its findings has since been erected on the site - a first for the University.

Another aspect of the programme that warrants notice is its computing. Knowing that distributional analyses was one of the main components of the site we wished to explore, and given the computing context of the construction programme - variously the University's new Department of Computing (The William Gates Building) and Microsoft's European Research Centre - we approached Microsoft to support the excavations' full computerization. This proved successful and, after first exploring other options, the site plans were digitised into AUTOCAD MAP. Primary data was attached to the graphical objects created in CAD and, when imported into ARCVIEW, this provided a linkage to the site database created in Microsoft Access, enabling a GIS approach to post-excavation analysis. This was further facilitated by the use of terrain modeling software (SURFER),

Archaeological Investigations at the New Cavendish

After the completion of excavations at Vicar's Farm, a subsidiary phase of development work was programmed just to the south on the site of the New Cavendish Laboratory. Archaeological trial trenching in May 2001 followed by area stripping in October of the same year revealed only one boundary ditch and a pit of Early Iron Age (Figure 1.6; Lucas 2001, Armour 2001). There was a small but still significant assemblage of cultural material from these features, suggestive of low level occupation consistent with the thin scatter of pits of similar date found at the southern edge of the Vicar's Farm site (see below).

As mentioned, remains of prehistoric, Roman, Medieval and post-Medieval features were uncovered at Vicar's Farm, although the Roman archaeology dominates the site and forms the primary content of this volume. However, it would be remiss not to discuss at a general level the nature of the non-Roman archaeology found and so, as part of a general overview of the archaeology on the site, both pre- and post-Roman activity will be summarised here, but otherwise not further discussed in this volume. Further details about the non-Roman aspects of the site can be found in the archive report (Lucas & Whittaker 2001) and to some extent, other publications (for the Mesolithic see Conneller forthcoming).

Prehistoric

Mesolithic-Late Bronze Age

The area was sporadically visited in prehistory as attested by the presence of flint tools, which reveal a subtle but definite pattern of shifting land use as ground water levels decreased. During the Mesolithic (6000-4000 BC), a discrete flint scatter occupied the southern ridge of a natural basin in the centre of the site which may have been wet at the time (Figure 1.7; see Chapter 2). Subsequent visitation in the Neolithic and Bronze Age (4000-1000 BC) is marked by a movement down into and around this basin as the land dried out. Although no associated features were identified, the nature and distribution of the worked flint across the site can still be used to interpret the nature of this activity.

The Lithics (C. Conneller)

The Vicar's Farm site yielded a small assemblage of mixed date consisting of 180 pieces of worked flint (see Table 1.2) and 1674g of burnt flint. The material recovered spans the Mesolithic to the Late Bronze Age. A substantial proportion of the assemblage dates to the Mesolithic period. Diagnostic pieces include a microlith, an awl, a burin and burin spall and a number of endscrapers. Frequencies of blades and fine, narrow flakes are high and one microblade core and 8 blade cores were recovered. Knapping was conducted using a soft hammer and core platforms were carefully prepared to aid the detachment of flakes and blades. This technology is also characteristic of the Early Neolithic and it is possible that material of this date is present. However the balance of diagnostic tools suggests that the majority of this blade/narrow flake debitage is Mesolithic in date.

A small amount of material suggests a Late Neolithic presence in the area. These include two small discoidal cores, squat flakes with some evidence of preparation and a fine sub-circular knife. A polished stone axe may have been deposited during this occupation – though it could also belong to the Early Neolithic. Whichever part of the Neolithic the axe dates to, it appear to have been part of an occupation that was fairly ephemeral – at least in terms of the lithics that were left behind – and it appears to have been deposited in relative isolation.

The remainder of the assemblage is later prehistoric in character, dating to the later Bronze Age. The pieces are crude, the product of unsystematic and haphazard reduction. Mistakes – in the form of pieces with incipient cones – are present. Tools belonging to this occupation are relatively few, but include scrapers, irregularly retouched pieces and naturally fractured flakes, which were retouched and used as tools. The raw material used throughout was a black gravel flint, though light brown and orange/red pieces are also present. This material varies in quality, from nodules that are relatively fresh and un-rolled, to flawed and extensively abraded pieces.

The Mesolithic activity on site clearly represents occupation – blade production focused in one area, but also more widespread tool use for tasks such as hide processing and working on other materials. In general, the low densities and broad nature of the assemblage suggests short-term, non-specialised occupation, much as one would expect to occur across the landscape, except perhaps for the knapping site. As noted, the location on clays may have been unusual, but not exceptional and as Conneller suggests, may particularly be associated with certain tasks such as blade production *because* of its marginal location. Given the possibility that the area may have been seasonally wet (see Chapter 2), the location may also have offered useful resources. More extended discussion on the Mesolithic material and activity will be theme of a forthcoming paper (Conneller, forthcoming). Later activity (Neolithic/Bronze Age) is much sparser and may be more indicative of specific events rather than any prolonged occupation. One trend noted was that over time, the flints do seem to distribute down from the clay into the sands and gravel which may reflect a drying out of the basin (Conneller, pers. comm.). More generally, the activities taking place on the site cannot be seen independently of the much denser concentrations of flints which lie upslope on Madingley Rise. Although not exclusive, it is still likely that occupation would have favoured the higher ground, and the flints

recovered earlier in the last century around Gravel Hill Farm (now University Farm) probably signify a much more visited locale.

Iron Age

A number of features with Iron Age pottery were excavated but only two were actually Iron Age in date; in the southern part of the site, F1114 and F5386 contained Early Iron Age pottery, while re-deposited Early Iron Age pottery also occurred nearby in a Roman ditch F5359. In the north, a cluster of pits can be dated to the Later Iron Age (c. 300 BC - 43 AD) on the basis of associated pottery: F4149, F4148, F4227, F4147, F5621, F4146, F4228, F4212, F5628 and F5634 (Figure 1.8). One other pit is probably also of this period, F5044 along with another cluster a few metres to the southeast:, F4240, F8021, F8023 and F8024. Apart from one small fragment of burnt clay in F4148 (7g), the finds consisted of pottery and animal bone. From F8023 came a single brooch, dated to the 4th century BC. From the spoil (<5223>; metal detecting), a Later Iron Age coin, probably minted late 1st century BC/early 1st century AD was retrieved (identification by Adrian Challands).

The Iron Age Pottery (with J. D. Hill)

147 sherds (900g) of Iron Age pottery was examined, and can be divided into a number of groups on the basis of association and date (see Table 1.3).

Later Bronze Age/Early Iron Age: One feature (F5386/[1186]) produced a sherd in a black, flint-tempered fabric while another sherd of similar date came from [1182] in the same feature. Both of these are probably residual, occurring in Late Iron Age/Early Roman features.

Early Iron Age: One feature contained a sizeable group of Early Iron Age pottery (F1114, 86 sherds/386g), consisting of burnt flint-tempered vessel fragments, probably from settlement related activity. All forms were plain, undecorated and unburnished which might suggest a date in the latter part of the Early Iron Age.

Later Iron Age: From the cluster of pits in the northern part of the site, three produced Middle and/or Later Iron Age type vessel fragments: F4228 produced handmade vegetable tempered sherds of Middle-Late Iron Age date; F4147, a group of 1st century AD grog-tempered and vegetable-tempered sherds; and, finally, F4166 produced 32 fragments from a black, grog-tempered, combed jar/cooking pot also dating to the 1st century AD (two small sherds of an Early Iron Age burnished vessel were also present in the latter).

From F1135, a classic vegetable tempered sherd dating to the Middle Iron Age was also identified, while from F1306 came a sandy sherd which is attributable to any time in the Iron Age. Finally from F5003 and F5009, a small sherd of Iron Age date in each was identified (both from the evaluation). All of these sherds are probably residual.

The Plant Remains (R. Ballantyne)

Pits F5359 and F5621 contain very low amounts of charred plant remains. One Celtic Bean (*Vicia faba*) is the only example at Vicar's Farm, none being found in the Roman contexts. No cereal chaff is present in these two features, but two grains of barley (*Hordeum* sp.) and wheat (*Triticum* sp.) were recovered. Several seeds of brome grass (*Bromus* sp.) were also recovered from F5621. The few charred remains make interpretation difficult, but they do not represent the chaff-rich processing debris so common within the Roman contexts. Waterlogged plant remains within F5621 indicate that the local environment was damp, shady and relatively undisturbed.

The Faunal Remains (A. Clarke)

The Iron Age assemblage is small with only 23 bone fragments, 44% of which are identifiable to species and comprise the main domesticates save pig (Table 1.4).

Brooch (N. Crummy)

A La Tène I brooch of Hull & Hawkes Type 1Bb (1987, 95-8) was recovered from F8023 (<4798> SF 534). This is well-preserved and complete apart from the tip of the pin and the upper corner of the catchplate (Figure 1.9). 52 mm in length, the spring is of four coils and has an iron rod through it. The narrow bow is D-shaped in section and has an elongated leaf-shaped design of three mouldings defined by grooves, the central one knurled. The returned foot has a small plain disc and long snout which touches the base of the bow. The end of the snout is expanded. The curve of the foot before the disc is transversely notched. The design of the snout is closely matched by that on a 1Bb brooch from Mount Batten, and also on several brooches of Type 1Bc (Hull & Hawkes 1987, pl 32). The bow decoration is not closely paralleled on 1Bb brooches, though several do have a line of punched dots down the centre of the bow. However, the elongated leaf shape of the design does appear in wider form on some examples of Type 1Bc, which has a wider leaf-shaped bow. The majority of 1Bc brooches with this type of design have an easterly distribution, Barrington, Saham Toney, the lower reaches of the river Thames, and possibly Dragonby (Hull & Hawkes 1987, pls 29-32). Thus the Vicar's Farm brooch appears to represent a stylistic, and perhaps regional, link between the two subtypes. The notches on its foot appear to be a unique feature. The brooch is British-made and belongs to the 4th century BC.

Discussion

Clearly the quantities of Iron Age features from the site are small although they do concentrate in two areas. The earliest material, which may even date back to the Later Bronze Age, lies at the southern edge of the site and occurs in only a few discrete features, most of it probably residual. However the assemblage from one (F1114) is particularly substantial and does suggest settlement activity close by. Investigation just to the south of the site by the Cavendish Laboratory uncovered a length of ditch and a single pit, which produced burnt stone, charcoal, fragmented animal bone and Iron Age pottery (Lucas 2001; Armour 2001). It reinforces the probability of settlement in the vicinity. Recent evaluation fieldwork at High Cross *c.* 0.75 km to the southwest uncovered evidence of Middle-Late Iron Age settlement (Whittaker 2001),

sited on localised silty sands within the expanse of gault clay, and is the best evidence for substantial Iron Age settlement in the area, albeit at some distance from, and later than the occupation at Vicar's Farm. The activity here is probably too far to be part of the same settlement, but may indicate another settlement and together with evidence of another settlement north on Madingley Rise, would seem to confirm Evans' estimate that Later Iron Age settlements on the clays were spaced at intervals of c. 0.5-0.75km (Evans 2000).

The other focus of Iron Age activity occurs on the other side of the site, marked by a cluster of pits later enclosed within a Roman ditch system. This is a curious group – the pottery and a La Tene brooch date to the Middle-Late Iron Age date, i.e. 4th century BC to 1st century AD, but the nature of the activity – a few pits – is very minimal and not indicative of permanent settlement but rather visitation. More curious is whether the later Roman ditches which enclose the area of these pits is in any way cognisant of their presence, or of this area as a 'place'. The nature of this Iron Age activity is hard to understand but it is clearly short-term occupation or visitation, perhaps on a repeated basis. Food was consumed but beyond that little can be said. There is a pit containing disarticulated human remains in the same area (F5017; see chapter 4), which has been ascribed a Roman date on the basis of one sherd – but if this is intrusive (as the pit was disturbed) then a mortuary or funerary aspect to the activity might be possible. This might also provide some context for the establishment of the Roman site, especially its primary elements, the cremation cemetery and shrine (see chapter 3). The nearest possible associated later Iron Age settlement is on Madingley Rise, where both Early and Late Iron Age pottery has been recovered from near the Hoyle building (see above).

Roman

Pre-settlement ditch system

Prior to the Roman settlement, a large curvilinear ditch line forming a semi-open enclosure occupied the central area of the site, its purpose probably as some form of stock enclosure (Figure 1.8; G12). Whether this is pre- or post-Conquest is difficult to ascertain. There is clearly more than one phase to this layout and its relationship to the Roman settlement core is unclear – while it almost certainly pre-dates it, is was still open during the early phase of Roman occupation and backfilled in the mid-late 2nd century on the basis of pottery in its fill. Ditch F8114 (1.2-1.3m wide, 0.42-0.55m deep) would appear to be continuous with F5498 (*c.*1m in width and 0.2m in depth, dated AD120/140-200), its south-western terminus masked by later features, but possibly continuing some way south along the line of the later G18 enclosure. Ditch F8120 (1.5m wide, 0.77m deep) also seems to be part of this system. The ditch system would appear to be associated with a well F5610 (1.1m diameter, 1.7m deep, dated AD 45-70/100), which by association, would suggest a post-Conquest date for the whole group, probably pre-Flavian. Also nearby is a pit/dump of pottery F5530 of similar date (in an area 1 x 0.5m, dated AD45-60). Mirroring this large ditch on the north side was F5515 (1.9m wide and 0.6m deep, dated AD80-180, and later re-cut as F5514). This smaller ditch line probably continued east as F4849 (1.1m wide, 0.3m deep, dated AD140+).

The Roman Settlement and Field System

The Roman settlement is discussed in detail throughout this volume so will only be cursorily summarised here. In short, the settlement begins with the establishment of a cremation cemetery and small timber shrine c. AD80 which are either contemporary with or slightly pre-date a farmstead characterised by a formal rectilinear ditch system, an aisled timber hall and various other enclosures. A major trackway runs down to the settlement from the northwest and another probable trackway runs east to the southern gate of the Roman town. By the end of the 2nd/early 3rd century, the settlement had expanded greatly to the north and south, with new structures and sub-enclosures. Expansion increased in the late 3rd/4th century when the site reaches its peak, expanding westward and eastward, with major internal segmentation, and an inhumation cemetery on its southern edge. The site appears to have been abandoned in the early decades of the 5th century. Throughout this volume, a three-phase periodisation has been employed in the discussion of the Roman archaeology which although inevitably coarse, provides a framework for a more nuanced interpretation (Figure 1.10):

Phase I (AD80-180) – This period sees the establishment of the core settlement and many of its internal features such as the shrine, timber building and cremation cemetery.

Phase II (AD180-270) – In the middle period, the site undergoes major expansion to the south, contemporary with the establishment of an, initially unrelated, field system. In the core of the settlement, the aisled building and cremation cemetery go out of use while the eastern side sees the establishment of some new features.

Phase III (AD270-410+) – In the final period, the site transforms radically as a third area is added to the south, linking up the main settlement with the southern field system, which now has an inhumation cemetery on its boundary. In the core of the site, the features in the eastern half develop to form a new centre of activity, while the eastern boundary of the site is backfilled and the whole core opened up to the east, beyond the limit of excavation.

Medieval, Post-Medieval and Modern

By the middle of the 5th century AD, the site was completely abandoned and apparently unoccupied until the present day Vicar's Farm was built in the early 19th century. However, for most of the time prior to this, the land was agricultural, indeed until the present works, most of it remained in agricultural use. The present Vicar's Farm (formerly known as Clunch Farm) was only built in the early 19th century and occupied until the mid 1980s.

Medieval and Post-Medieval (c. 1300-1800)

No structural evidence survives to suggest any activity on the site in the centuries after the Roman period and in all likelihood, the site lay abandoned as open waste ground. The archaeological evidence for later agricultural activity comes from the remains of ridge and furrow that scoured most of the site in broad, north-south strips

(Figure 1.11). From documentary sources, the turn over of this land for arable use is at least as early as the 14th century and from the few recovered objects in the furrows and features from the site, this date could be pushed back to the 13th century. These include a small, background scatter of Medieval pottery from the 13thcentury onward as well as a Henry III coin dating to 1248 (SFno.277) and an Edward I or II coin dating to 1300-1310 (SFno. 256). Hall and Ravensdale's (1976) reconstructed map of the West Fields show that parts of the site were under cultivation or pasture, and include a field called `Brunneforth dole' and an area described as `Froshis Croft'. In addition, a major ditch ('Willowes Ditch') is shown running east-west across the northern third of the site (Figure 1.12). Apart from the base of furrows recorded on the present site and elsewhere (e.g. Clarkson Road; see White 1998), upstanding earthworks of ridge and furrow can still be seen to the north west of site (Dickens 1998) while further remnants have been recorded as existing along the western margin of the site (Dickens 1999a).

Faunal Remains (A. Clarke)

The assemblage for the latter phases of the site is much the same as that recovered from the earliest. Only a small amount of bone was recovered (236 fragments) 62% of which were unidentifiable. Similarly, it only produced enough identifiable bone to confirm the presence of main domesticates - cattle, sheep, pig, horse and a single bone from a possible duck species (Table 1.5).

The Finds

Most of the finds came from the ploughsoil or the surface of un-excavated features; only in a few instances were finds retrieved through excavation. Much of the metalwork came through metal-detecting and again, from the ploughsoil, subsoil or surface of features. The finds are summarised in Table 1.6. A certain amount of post-Medieval coal and clinker occurred from the site (see Cowgill, in Lucas & Whittaker 2001) along with brick and tile and burnt clay, but these will not be discussed further. Pottery was fairly sparse, and comprised mostly post-Medieval glazed red earthenwares. Identifications by David Hall noted two sherds of 13th/14th century Ely ware, plus a 14th century fenware sherd and possible Grimston ware. Also there were two sherds of 15th/16th century Essex redware, and 16th century German stoneware from Raeren and Frechen. 17th century wares included Surrey whiteware, Ely ware, and German stoneware from Cologne. 18th and 19th century English salt-glazed stonewares occurred along with Staffordshire whitewares. The glass was examined by Hilary Cool in the assessment stage and was almost all bottle fragments, chiefly from wine bottles. One fragment had a seal with a monogram on it (<172>, [133]). There were 3 fragments of window glass and a marble stopper from a Codd/Hamilton water bottle.

Coins, Tokens and Medals (A. Challands)

12 coins, 1 jetton and a commemorative medal were identified:

<4893>, SF79, 1 cu alloy, coin; Edward I Stirling c.1303-1305.
<4896>, SF84, 1 cu alloy, coin; George II farthing minted 1730-38 A.D.
<4934>, SF165, 1 cu alloy, jeton; mostly illegible, prob. 16th/17th century jeton
<4954>, SF205, 1 cu alloy, coin; illegible-prob.. 18th c. half penny
<4971>, SF256, 1 cu alloy, coin; Edward I or II farthing 1300-1310 A.D.
<497>, SF280, 1 cu alloy, coin; Henry III Long Cross, 1248 AD.
<5016>, SF368, 1 cu alloy, coin; illegible, but prob. 18th-mid 19th farthing.
<5070>, SF495, 1 silver half coin; Scottish William.
<5071>, (spoil) 1 cu alloy, coin; illegible, has the appearance of a modern coin.
<5081>, (spoil) 1 George I half penny, minted 1719-1724.
<5230>, (spoil) 3 coins and 1 medal: a) George V penny, 1912; b) Halfpenny, 1958, c) George, Dump farthing, early 18thc; d) medal commemorating death of Duke of York, Jan. 5th 1827.

Other Metal Finds (N. Crummy)

The medieval and early post-medieval items are largely dress accessories and lead weights and tokens, but two post-medieval cloth seals are also present, some structural and other fittings, and some horseshoe fragments (Figure 1.13). The latter are all of the lobate early medieval form. The medieval lead tokens represent small change, used to fill a gap in the official currency. Recent excavations at Trumpington, south of Cambridge, also produced several medieval weights from the topsoil. It may be that both sites were used for fairs or markets held outside the medieval city limits. Tools are restricted to a punch and a chisel. A pair of shears represented by a blade fragment were of the small size used for personal grooming.

Lead Tokens/Seals

a) <4367> SF 103. Post-medieval clothier's or weaver's two-disc seal. The top disc bears a conventional privy mark (a long-footed 4 and XX) with the initials R K. The design is in relief and set within a beaded or cabled circle. The lower disc is plain, with a central hole plugged by a burred strip, the end of which projects beyond the disc on the side opposite to the narrow strip which joins the two discs. Diameter 23 mm. Stylistically this seal belongs to 16th-18th centuries.

b) <4444> SF 543. Token with a six-pointed floret on one face and an open trellis/weave pattern on the other. See <4454> 2-4 below. Diameter 32 mm.

c) <4454>. Spoil heap detector finds. 1) Two-disc cloth seal; most of the design was destroyed when the two discs were joined together. The surviving legend reads, in Lombardic lettering, ...V (fleur-de-lys) OF (fleur-de-lys) .... The terminal V is probably from the contracted form PANV, 'cloth'. The reverse bears imprints of the cloth. Diameter 21 mm. 2) Thin token with a six-pointed floret on one side (see <4444> above); the other is blank. Diameter 20 mm. 3) Token with an open trellis/weave design on one side, as <4444> above; the other side is blank. Diameter 23 mm. 4) Decayed disc, no original edges survive. Probably a token. Traces of an open trellis/weave pattern remain on part of one side. Diameter 25 mm. 5) Thick plain token or weight. Diameter 24 mm, 4 mm thick. Weight 18 g.

d) <4424> SF 461. One-disc token with relief design of a stylized face. Two arched lines of hair (or eyebrows) frame raised dots for eyes, then run together to form the nose. The latter may alternatively be seen as a narrow beard. This design is a highly simplified version of coin portraits (*eg* Sutherland 1973, pl 32, 280). Diameter 18 mm, 3.5 mm thick.

Lead Weights

The following weights have been arranged by form. The difficulty of attributing a weight which is either incomplete or worn to one or other of the systems (troy, avoirdupois, mercantile. apothecaries) in use in medieval England has been shown by studies in Biddle 1990, 908-917, and Egan 1999, 301-22. Some attempt has been made, however, to relate their weight in grams to that in ounces, using the hypothetical range of 26.6 to 31.1 g to an ounce defined by Drinkall & Stevenson (1996).

a) <463>. Metal-detector find. Conical polygonal ?weight, hollow underneath. The underside is rough and irregular, and is unlikely to have been fitted with a metal suspension loop as <4362> and <4374> below. Height 24 mm, maximum diameter 41 mm. Weight 35 g; overweight for 1 oz. (Fig 1.13: 4.).

b) <4451> a. One of three weights recorded under this number. Well-made truncated conical weight, polygonal in section. The upper part is rebated on two sides and pierced to form a suspension loop. Slightly dished underneath. Length 27 mm, section 13 by 14 mm. Weight 27 g = 1 oz.

c) <4451> b. One of three weights recorded under this number. Carinated, with flat base and truncated conical top in which is set the remains of an iron suspension loop. Length 40 mm, diameter 35 mm. Weight 148 g = 5 oz.

d) <4451> c. One of three weights recorded under this number. Plano-convex weight with central perforation. The flat face is plain, the upper face is covered with random lines and impressions. Height 8 mm, diameter 22 mm. Weight 22 g; less than 1 oz. The metal of this item is distinctly different to that of the other weights. Possibly Late Saxon, as Drinkall & Stevenson 1996, Type 2 (Fig 1.13: 3).

e) <4362> SF 83. Carinated weight, the upper side conical, the lower rounded. Part of a link from a copper-alloy chain remains in a split-pin or similar fitting embedded in the top. Length 25 mm, diameter 50 mm. Weight 327 g; perhaps 12 oz. Possibly Roman, *cf* Neal & Butcher 1974, fig 56, 47. (Fig 1.13: 1).

f) <4374> SF 153. Long biconical weight with a suspension loop at each end. One loop is broken, the other retains a small fragment from an iron ring of chain link. Length 50 mm, maximum diameter 25 mm. Weight 78 g = 3 oz. (Fig 1.13: 2).

g) <4447> SF 549. Globular weight, dished on the upper side and slightly pointed on the lower. An iron rod for suspension is embedded with in it, shown by traces of iron in the dished area and around a crack on the lower side. Length 43 mm, diameter 42 mm. Weight 287 g = 10 oz.

h) <4376> SF 176. Discoid weight with one flat and one sloping, presumably worn, face. There is a central irregular hollow on the sloping face, which also has short grooves set at intervals around the edge. Diameter 38 mm, maximum thickness 13 mm. Weight 90 g = 3 oz. (Fig 1.13: 6).

i) <4434> SF 499. Small annular roughly made weight. Diameter 22 mm, 7 mm thick. Diameter of central hole 6.5 mm. Weight 9 g; overweight for ¼ oz, but the correlation between this weight and <4396>, of the same form, below should be noted (Fig 1.13: 5).

j) <4396> SF 231. Small annular weight, similar to <4434> above. Diameter 22 mm, 7 mm thick. Diameter of central hole 7 mm. Weight 18 g; overweight for ½ oz; note the correlation with <4434> above.

k) <4398> SF 249. Elongated, roughly arrow-shaped, pendant weight with lozenge-shaped section. The suspension loop is broken. Length 47 mm, maximum thickness 10 mm. Weight 57 g = 2 oz.

l) <4450>. X (10). Metal-detector find. Fragment of an elongated weight as <4398>. Length 44 mm, maximum thickness 12 mm. Weight 42 g; perhaps 2 oz when complete.

Horseshoes and related fittings

All the horseshoes are iron and of a distinctive early medieval lobate type:

a) <4683> SF 438. Branch of a lobate horseshoe of Clark's Type 2a, with countersunk round nail holes and calkin. Length 99 mm. This type may occur before the conquest, but is commonest in contexts of the later 11th and 12th century (Clark 1995, 86, 95-6).

b) <4618>. [4473] F5536. 1) Very worn branch of a Type 2a lobate horseshoe. Length 109 mm. 2) Branch of a Type 2b lobate horseshoe, with countersunk square nail holes and calkin. Length 128 mm. Type 2b appears in the mid 12th century and continues in use into the 13th (Clark 1995, 86, 95-6). 2)

c) <4641> [4931]. Fragment of a Type 2a lobate horseshoe, with countersunk round nail holes and calkin. Length 82 mm.

In addition, a large iron buckle may be from a horse harness:

d) <4705>. Large rectangular buckle, from either a wide belt or strap or from horse harness. Length 34 mm, width 48 mm. Similar buckles are found throughout the medieval and post-medieval periods and cannot be closely dated.

Tools and Implements

a) <4692> SF 542. Knife with central placed tang. Both back and edge are very slightly convex and curved together more markedly towards the tip. Length 118 mm.

b) <4663> SF 169. One blade from a pair of shears. The back of the blade is rounded. There is a lozenge-shaped hole in the blade about 15 mm in from the upper end. This is the position in which inlaid maker's marks are often set (Cowgill *et al* 1987, figs 71-3. Length 103 mm. The shears were of the small size used for personal grooming.

c) <4669> SF 329. Punch, burred at the head and square in section. The tip is damaged. Probably a smith's tool. Length 75 mm.

d) <4637> [4836]. Chisel with burred head. The section tapers from square just below the head to the thin edge. Length 111 mm.

Buckles and other costume accessories

Five copper alloy buckles and a finger ring were identified, as well as a wrist clasp:

a) <4745> SF 99. Fragment of an oval buckle with two prominent knops on the outer edge flanking a series of narrow mouldings. Length 15.5 mm, width 22 mm. This is an example of a long-lived series that was made from the late 12th to late 14th centuries, and a close parallel to this particular style of decoration was found in London with pottery dating to the second half of the 14th century (Egan & Pritchard 1991, 72-8, esp fig 44, 299).

b) <4770> SF 184. Oval buckle with the outside edge ornamented with vegetal knobs and mouldings and bud-like projections flanking the bar. The tongue is missing. Length 25 mm, width 25 mm. The form is related to the same long-lasting medieval series as <4745> above (Egan & Pritchard 1991, 72-8), though the more overtly vegetal decoration on this example suggests it is of early post-medieval date. It is reminiscent of the designs on double buckles from, for example, Exeter and Chelmsford (A R Goodall 1984, fig 190, 81; A R Goodall 1985, fig 26, 11-12). A buckle in the same series from Winchester also has projections flanking the bar, and comes from a context dated from the mid 15th to early 16th century (Hinton 1990a, fig 132, 1208).

c) <4830>. Spoil heap detector find. Small rectangular buckle with the corners on the outer edge rounded. The central part of the outer edge is recessed to take a sheet-metal roller. The tongue is missing. Length 16 mm, width 15 mm. The alloy is of an unusual colour and well-preserved, and this object may therefore be quite modern. However, a similar example was found with later 14th-century pottery in London (Egan & Pritchard 1991, fig 60, 426).

d) <4825>. Spoil heap detector find. Buckle-plate with two rivet holes placed on the centre-line, and a central lug to form the hinge with the buckle. This lug is broken and probably also pulled out of alignment. Its sides are rebated. Length 48 mm, width 16 mm. Medieval or post-medieval. Found with a short fragment of copper-alloy wire, 45 mm long (bent).

e) <4755> SF 140. Back-plate of a rectangular folded buckle-plate. There is a rivet hole in the two outside corners and one in the centre. A fourth rivet hole close to the broken folded end is probably

secondary as there is no matching hole on the opposing edge. The folds for the hinge are rebated. Length 38 mm, width 19 mm. A plate of this type with three rivet holes came from a 13th-century context in London (Egan & Pritchard 1991, fig 72, 502), but the form need not be confined to that period. (Fig 1.13: 7).

f) <4757> SF 145. Complete stirrup-shaped finger-ring which would have had a gemstone, or more probably a glass imitation of a gemstone, set in the bezel. The stone is now missing, but the hollow in which it was set retains traces of a substance which may be decayed glass or perhaps glue for fixing it in place. Internal diameter 18 mm. This form of finger-ring was popular from the mid 12th century throughout the medieval period (Hinton 1990b, 647, fig 176, 2082; Egan & Pritchard 1991, 326-7). (Fig 1.13: 8)

g) <4831>. Metal-detected find. Cast rectangular copper-alloy plate decorated with two panels defined by grooves, each containing a pair of ring-and-dot motifs. There is a hole for attachment in one corner, and another set in from the other corner on that side. Length 42 mm, width 13 mm. While superficially reminiscent of Migration Period wrist-clasps, it lacks either the tongue or the slot which would identify as such. The thickness of the metal and some scarring on the back suggest it has been attached to a larger metal object. It was found in association with a small cast fitting which has a handle of post-medieval or modern pistol-grip form, and it has been strip-cleaned using some acidic substance, which suggests it has been found elsewhere and brought onto the site. (Figure 1.13: 10).

Other

Other objects included a copper alloy book clasp, two keys (one in copper alloy, one in iron), and a rim from a copper alloy vessel:

a) <4778> SF 251. The front-plate of a book-clasp. Length 53 mm. The surface is decorated with incised lines and large ring-and-dot motifs set around rivets which secured the leather strap between the two plates of the clasp. Similar clasps come from Basing House, Southampton, Sandal Castle, Chelmsford, Colchester and Norwich (Moorhouse 1971, fig 25, 162; Harvey 1975, fig 245, 1881; A R Goodall 1983, fig 2, 113; A R Goodall 1985, fig 29, 52; Crummy 1988, fig 67; Margeson 1993, fig 40, 452-5). They were riveted to the book-cover and hooked onto an 'eye' fitting (Baart 1977, no 756) to keep the book closed when not in use.

b) <4772> SF 186. Copper-alloy rotary key for a mounted lock with circular bow of polygonal section, narrow simple bit, and hollow end to the shank, which is decorated with mouldings and grooves. Length 44 mm. The crudeness of the casting of the bow and the decoration on the shank suggest this is of late medieval or early post-medieval date. It is Type 9 of that date at Winchester (Goodall 1990).

c) <4746> SF 102. Fragment from the rim of a cast copper-alloy object. The rim is slightly everted. Probably from an open-mouthed vessel, such as a cauldron or ewer (*cf* Egan 1999, figs 130-1). Diameter approximately 180 mm, which is appropriate for a vessel. The metal is rather thin for this to be from a bell.

d) <4737> SF 48. Heavily-leaded copper-alloy object consisting of a disc soldered onto a fragment of a wide curved band. The surface of the disc has been scored to produce an irregular chequerboard effect. Diameter 29 mm, maximum width of band 18 mm. The rim of the disc is roughly beaded. Date uncertain, but probably medieval or later. (Fig 1.13: 9).

e) <4720>. [945]. Cleat or similar fitting, with elongated oval head and short pointed terminals. One terminal is straight and angled slightly outwards, the other is bent round so that the point lies parallel to the head. Length 24 mm, height 10 mm. (Figure 1.13: 11).

f) <4732> [4819]. Fragment of copper-alloy tubing made from rolled sheet. Its function is unknown. Length 95 mm, diameter 8 mm.

g) <4664> SF 190. Oval loop handle from a large iron key. Only a short piece of the shank remains. Length 37 mm, width 37 mm.

h) <4704>. Iron fitting similar to a split-pin with looped-head and arms, but the arms are wide and straight-sided. Length 77 mm, section of arms 9 by 20 mm.

i) <4460>. Fragment of lead with rectilinear mouldings on each side. Probably from window-leading or a grille. Length 31 mm, width 6 mm.

j) <4425> SF 479a. Thick piece of lead with one flat subcircular face, slightly dished in the centre. There is a girth groove of irregular width. The latter, though quite wide in places, in reminiscent of that on lead plugs from ceramic vessels, and it is possible that this is also a plug, though its thickness suggests that its form was not important on at least one side. It may have been used to plug a tank, gutter, or drain. Maximum dimensions 22 by 18 mm, 13 mm thick.

k) <4380> SF 198, Irregular refrozen puddle of lead, probably formed over time in a slight dip in a ground surface. The edges are damaged. Maximum dimensions 68 by 49 mm by 15 mm.

Discussion

While there are no features other than ridge and furrow from this period, there is rather a high number of finds, perhaps rather more than one might expect from simply an arable field. The horseshoes and horse harness buckle could be related to traction animals for ploughing and a portion of the finds could be explained away through middening or casual loss. However, there are rather a large number of these, particularly the number of lead weights, lead seals and coins seems excessive for this kind of explanation. It is perhaps more likely that the fields were, at some point, perhaps used as a seasonal small market/fairground and this would account for these types of finds. There is no documentary evidence to suggest this was the case, but this need not have been a major fairground and its use as such, may have only had a short duration during the Medieval period.

Modern (c. 1800-2000)

The land remained part of this 'Medieval' field system until the act of Enclosure in 1802 and soon after, the present day Vicar's Farm would have been built. An estate map of 1789 at Corpus Christi College does not show any buildings on the site but the stream, which was then known as Willow Ditch, is shown with trees along its north bank. The area was within the Middle Field of the Cambridge West Field which was enclosed by Act of Parliament in or shortly after 1802. At that time ownership of the land was re-organised and it became practicable to have farms well away from the town and within their own fields. It is therefore probable that the house and buildings were put up soon after that. On an 1804 Map of St. Giles parish, the area is marked as Lot 57, owned by Rev. William Parish and by Baker's Map of Cambridgeshire of 1824 it is named Chalk Farm; his larger-scale Map of Cambridge of 1830 shows the layout of the buildings much as it is now. The name is there given as Clunch Farm, which is corroborated by the first edition O.S. 1" map of 1836, and the stream is called Conduit Ditch (Figure 1.14). A survey of the farm buildings was carried out prior to demolition and limited excavation and investigation of associated archaeological features was carried out after stripping, which nonetheless produced some sizeable assemblages of material culture associated with the late 19th and early 20th century occupation of the farm (Lucas 2001).

Chapter 2. Profiling the Roman Land Surface

Preservation and Truncation

The Roman settlement has to be read through the lens of various constraints on the nature of surviving evidence. Several factors affected the extent of archaeological remains on the site. In the first instance, while the site was fairly well-defined on most sides, its eastern extent, particularly for the later period of activity, continued beyond the limit of excavation. This is frustrating insofar as this area may contain crucial elements to understanding the development of the site – so although interpretation in this volume will proceed according to the known, this element of the unknown must still remain a factor for consideration. Nevertheless, examination of finds densities over the site (see below) does not suggest any increase toward the east, which might be suggestive of dense activity; while this does not preclude the possibility of important features beyond the limit of excavation, it is hard if not impossible to characterize what form this might take.

More problematic than the horizontal extent of archaeology is its vertical depth and degree of stratification. Generally the depth of soil across the site increased from south to north, mostly due to the fanning out of colluvium washed down from Madingly Rise. At the northern end of the site, the total depth of soil cover was 1.55m (0.7m thick ploughsoil and 0.85m thick colluvium) while at the southern end it reduced to 0.75m deep (0.45m thick ploughsoil over 0.3m thick colluvium; see Figure 2.1). The ploughsoil consisted of a dark brown clay silt, while the colluvial layer was a pale-mid yellow brown clay silt with occasional gravel. As discussed above, the site lay under arable cultivation up until archaeological investigation, and consequently heavy ploughing since at least the 13th or 14th century had truncated most buried land surfaces or positive features such as banks or walls (see chapter 1, Figure 1.11). There are however two exceptions: an area beneath colluvium in the northwest corner of the site and an area within a natural basin or hollow, which lay in the central part of the site, both of which preserved old land surfaces and a palaeosol.

The Colluvium

In the northwest part of the site, a thick colluvial deposit substantially altered the depth at which the natural geology was encountered by nearly 1m. This hillwash to postdates the Roman period as all the cremations were sealed by it, as was the dark earth layer over the quarry pitting south of the cremations.

Micromorphological analyses of the colluvial overburden (C.A.I. French)

The Vicar's Farm site is situated on Gault Clay with a calcareous clay loam soil of the Wicken Series present (Hodge and Seale 1966). The only exception to this is in the north-western sector of the site where there a *c* 60-100cm depth of brown silty clay loam has accumulated on a buried soil and overlying a small relict stream channel and a post-14th century ditch. This is probably hillwash or colluvial material derived from immediately upslope to the north, and possibly of late/post-medieval date. One spot sample for micromorphological analysis was taken from the colluvial /buried soil contact to characterise the hillwash material (Profile 1). The sample was made into thin section slides using the methodology of Murphy (1986), and described using the

international terminology of Bullock *et al* (1985). The hillwash material was a poorly sorted, dense, sandy clay loam. In particular, the fine groundmass was predominantly composed of illuvial clay, characterised by non-laminated dusty (or impure) clay.

The Hillwash (Profile 1):

Structure: poorly sorted; dense to very weakly columnar peds; *Porosity*: *c* 20%; 10% vughs, irregular to sub-rounded, <3mm; *c* 10% fine channels, <5mm long, <500um wide, weakly serrated, partially accomodated; *Components*: < 2% gravel, sub-angular, < 1cm; c/f limit: 100um; c/f ratio: 30/70 to 40/60; coarse fraction: 10% medium and 20-30% fine quartz, sub-runded to sub-angular, 500-100um, in all orientations; fine fraction: 10% very fine quartz, sub-rounded to sub-angular, 50-100um;10-20% silt; 30% clay; 5-10% micro-sparite calcium carbonate; greyish/yellowish brown (CPL), golden brown (PPL), pale yellow (RL); *Organic Component*: <5% micro-charcoal in fine groundmass, <50um; *Pedofeatures*: *Textural*: *c* 50% non-laminated, dusty clay in the groundmass, coating quartz grains and lining voids; weak to moderate birefringence, yellow to gold (CPL); *Amorphous*: weak amorphous sesquioxide impregnation of the whole fine groundmass; occasional discontinuous void infills of calcium carbonate and amorphous iron 'cemented' very fine quartz and silt.

The overburden in the northwestern sector of the site is definitely hillwash material dominated by illuvial clay and silt. Its occurrence surely represents the subsequent disturbance of clay-rich soils immediately uphill and to the north through soil disturbance. Hillwash in Cambridgeshire is a rare occurrence, with only two other examples known to the writer, namely overlying the Haddon Roman farmstead (French 1994) and the Iron Age site at Landwade Road, Fordham (French and Kousoulakou 1997). These occurrences were both also dominated by silty clay deposits.

The Basin

Towards the centre of the site lay a broad hollow, noticeable as a surface depression even prior to topsoiling, and was an area which was consistently prone to flooding during the excavation, leading to its on-site designation as the 'pond' (Figure 2.1). Indeed the southern half of the site as a whole retained water on its surface due to the clay subsoils and numerous field drains from the 19th and 20th century criss-crossed the site. While most of the site lay at 18-19m OD, this central basin dropped to 15m OD, a difference further accentuated after the overlying layers were stripped. The area presented problems from the start, in that removal of the ploughsoil exposed a large circular area of dark clayey soil sealing this basin with little indication of its depth or what lay beneath. A sondage in the evaluation had not reached the base, and it was unclear at the beginning whether this was in effect a buried pond or just a low lying area of land which was infilled. Moreover, none of the features on any side of this area offered any clues as none seemed to continue into this zone. In order to deal with this element of uncertainty, a two staged approach was taken; the whole area of the basin was first sampled on a 5m staggered grid with 14 1m square test pits (Figure 2.2), complemented by a subsequent trench bisecting the area along two axes (east-west and north-south) in order to obtain some information on finds density and soil profiles. This revealed essentially three layers beneath the ploughsoil – an upper mid-dark grey clay alluvial layer which contained medieval and post-medieval material as well as some residual Roman; a middle dark grey-black silty clay which contained solely Roman material; and then a lower pale grey clay silt which also contained Roman material and lay directly on natural or prepared metalled surface laid on truncated natural.

Based on this information, the area was subsequently stripped twice with a machine, once to remove the upper post-Roman alluvial soil (whereupon the area was metal detected), and then again to remove the lower Roman layers down to natural. Having done this, it was clear the area was simply a low lying basin of land as there was a density of features uncovered, which had not even been visible at the level of the upper Roman 'dark earth' horizon, although in section, they could clearly be seen to have been cut from within this layer. However, the presence of marsh herbs in the upper part of the Roman buried soil (see Scaife, below) may indicate the ground was prone to flooding.

These two areas, along with the fills of cut features, can be used to reconstruct and extrapolate the nature of the former land surface for the rest of the site during Roman occupation, although this will be complicated by changes in the soil matrix even within this span of time. For example, the 'dark earths' that seal many of the features and lie in the basin, would not have been present in the earlier phases of Roman activity and one of the questions to ask is when, how and why this soil matrix was created. In the next section, an attempt is made to characterise the land surface and upper soil horizons during the period of Roman occupation using these different lines of evidence.

Mapping the Upper Soil Profile and 'Dark Earth'

There are two ways we can start to characterize the nature of the dark earth and depositional formation processes in general across the site. One is to study the soils the soil matrix itself and its composition and derivation, the other is to examine the associated finds, their density and condition.

Soil Matrix Composition and Derivation

At a very coarse level, the cultural deposits across the site reflected the nature of the background geology. The site is geologically situated on Gault Clays although there are overlying superficial Quaternary deposits in the northern part of the site, specifically silts and gravels (Figure 2.3). The extent of these was mapped after the site had been topsoiled, while additionally numerous boreholes and test-pits conducted in the past provided more detailed information on the depth and stratigraphy of these deposits (Boreham 2000). The gravel marks the course of a probable palaeochannel, capped by fluvial silts indicative of a slow-moving river which may date back to the last interglacial (c. 120,000 BP). The nature of fills in cut features generally reflected the dominant soil base into which the features had been cut, representing the weathered subsoil. As a result, detailed soil descriptions of deposits associated with features will be absent from this volume, unless they are significantly unusual or otherwise merit discussion. The most obvious and widespread variation of fills from the background soil is the extent of their enrichment by organic matter – the 'dark earths' which infilled the tops of most features in the core area of the site and was similar to that infilling the basin. Since this is common across a wide part of the site, it will be discussed in some detail.

Dark Fills

The presence of dark fills, particularly in the upper part of ditches, are the most immediate connection to be made with the upper, dark earth layer infilling the basin.

The Micromorphological Analyses of the Ditch Fills (C.A.I. French)

The cut linear features on site were dominated by Roman ditch systems with black clay loam tertiary fills. This especially occurred in the low-lying northeastern and central sector of the site. As there was some question as to the composition and derivation of this 'dark earth' material, two spot samples were taken from ditches at site grids 294/665 and 279/675. Both samples of the 'dark earth' were essentially similar in composition and characteristics. These were composed of a dark brown to black, sandy clay loam, characterised by common very fine to fine charcoal fragments thoroughly mixed with the fine groundmass, abundant, non-laminated dusty or impure clay and a few minor anthropogenic-derived inclusions such as minute fragments of bone.

The 'dark earth' deposits from grids 294/665 (Profile 2) and 279/675 (Profile 3) (both samples are essentially similar and are therefore described together):

Structure: weak to moderately developed, small, sub-angular blocky peds, < 4mm; *Porosity*: *c* 12%; 10% vughs, <1mm, irregular to sub-rounded; 2% channels, <5mm long, <500um wide, weakly serrated, partially accomodated; *Components*: < 2% fine gravel, sub-angular, <2mm; c/f limit: 100um; c/f ratio: 15/85; coarse fraction: 5% medium and 10% fine quartz, 500-100um, sub-rounded to sub-angular; fine fraction: 10% very fine quartz, 50-100um, sub-rounded to sub-angular; 20% silt; 35% clay; yellowish brown (CPL), brown (PPL), pale yellowish brown (RL); *Organic Component*:: 20+% very fine charcoal throughout the fine groundmass, <100um; *Pedofeatures*: *Textural*: *c* 55% non-laminated dusty clay in groundmass, lining voids and coating grains, weakly reticulate striated, weak birefringence, yellow (CPL); *Amorphous*: very weak amorphous iron impregnation of the fine groundmass; minor amounts of anthropogenic inclusions such as bone fragments, <1mm, irregular to sub-rounded, in fine groundmass.

The tertiary ditch fills were essentially of a similar matrix composition to the colluvial overburden, which undoubtedly reflects the dominant influence of the local geology of clay-dominated Gault Clays. The abundant very fine to fine charcoal throughout the groundmass is responsible for blackening the soil and making the ditch fills more friable. This material must derive directly from settlement activity, probably from domestic fires, and its deliberate curation and dumping over a wide area of the site after it went out of use. These deposits were examined with a view to deciphering whether they represented dumped midden material and/or acted as a deliberately made topsoil, possibly for arable use or a 'plaggen' soil. Certainly, the carbonised organic content would have made the silt and clay dominated ditch fills and soils of the site much more friable and well drained. In addition, these ditch fills and an extensive spread of the same material over much of the site west of the barns, bear a striking resemblance to those observed at the nearby New Hall (1996) excavations (Coyle and French 1995).

At New Hall, these tertiary ditch fills and the associated 'dark earth' soil were dominated by sandy clay loam soil, wood ash, calcium carbonate and finely comminuted occupation debris. The matrix bore a strong resemblance to the 'dark earths' investigated elsewhere in England by Macphail (1983) and Macphail and

Courty (1985). It is possible that the 'dark earth' at New Hall was deliberately made through the addition of dumped refuse material with a very high organic matter. This had the effect of encouraging soil faunal activity and developing a better, well-drained structure in a rather poorly drained and 'heavy' soil and substrate, thus providing a viable topsoil for arable land-use. Indeed, the deliberate addition of large amounts of midden-type material to prepare a soil containing definitive signatures of arable agriculture has been observed at the later Bronze Age/earlier Iron Age site of Welland Bank Quarry, south Lincolnshire (French 1998).

The ubiquitous upper ditch fills and large areas of 'black earth' observed at Vicar's Farm suggest the deliberate addition of charcoal-rich, midden-type material to the site. This would have undoubtedly improved its fertility and drainage characteristics on a site that is otherwise poorly drained and prone to the accumulation of surface standing water due to the poor drainage characteristics of the Gault Clay subsoil. But, whether or not this site was subsequently used for arable farming after the Roman occupation cannot be proven due to the absence of the expected suite of micromorphological features (after Lewis 1998).

The Nature of the Dark Earth

As French suggests above, the most common explanation for the 'dark earths' is that they represent a deliberate attempt to improve the soil for arable farming; this is a difficult explanation for Vicar's Farm however, as the dark earth was clearing forming while the site was still in use as a settlement, with the dark earth concentrated precisely at the core of the occupation zone, not in marginal fields as one might expect if it was linked to farming. Late Roman features cut through this layer as well as being filled by it and it suggests this soil was created in the later Roman period rather than the post-Roman period, i.e. probably sometime during the 3rd century AD. While accepting that the dark earth has been deliberately 'improved' with midden-type (especially charcoal/ashes) material, this may have been done to improve its drainage more than its fertility – especially if this was in an area where people and perhaps livestock were mostly walking over. In short, the dark earth might be seen as the cumulative by-product of spreading hearth ashes over the settlement core in an attempt to create a drier/less waterlogged surface on which to live – this would certainly explain why the dark earths are concentrated in the core, which was also more prone to standing water, especially in the later Roman period. As a 'surfacing' strategy, it would also have been easier and simpler than metalling, especially over such a large area. The use of spreading ashes as a flooring material is common for example in Norse period sites, both inside and outside structures where its drainage properties have clearly been exploited (Milek 1999; Milek in prep.).

Finds Densities and Condition

Looking at the finds associated with the different layers in the basin area can help to characterize the formation of these layers and deposition associated with them. Taking just the most common finds – animal bone and pottery – some basic statistical measures can be drawn out (Table 2.1). Two things are evident from this basic analysis: the dark earth contains a higher average number of fragments of either bone or pottery than the alluvium or buried soil, yet by weight, and particularly average fragment weight, the trend is more linear with lowest values in the alluvium and

highest values in the buried soil. What this seems to suggest is that while the quantity of finds increases between the alluvium and dark earth, the difference between the dark earth and buried soil may have less to do with quantity than condition – i.e. finds in the dark earth are more fragmented than those in the buried soil, hence the higher number of fragments but lower average fragment weight.

What does this mean for our understanding of the dark earth? It suggests, at least in terms of finds deposition against earlier land surfaces, the quantities are not greater, but simply subject to more attrition. The greater attrition on finds in the dark earth layer is certainly consistent with the idea of a 'turned' soil as it would be for horticultural/agricultural use (see French above), but other factors may account for this such as trampling through human/animal movement. This latter is also consistent with the idea of the dark earth as a deliberate product of providing a well-drained surface, where movement is frequent. In contrast, the buried soil horizon is associated with the cobbled/metalled surfaces which would have suffered most movement, rather than the soil itself, which might explain the lower fragmentation in this layer.

The Local Environment

Macrofossil Preservation And Recovery (R. Ballantyne)

Bulk samples were collected by the excavators judgementally, with the aim of representing all types of feature both spatially and temporally. Samples aimed to be 15 litres in volume, but in many cases this was reduced due either to the size of the context or realities of excavation. The majority of bulk samples were processed by hand using bucket flotation; the flot being collected in a 300μm sieve and the heavy residue washed over 1mm mesh. Both flots and heavy residues were dried prior to sorting under a low-power Leitz binocular microscope. Several clearly waterlogged contexts - [1642], [1646], [4166], [4188], [4215], [4334], [4649], [4668] - were wet-sieved over a graded stack of 2mm, 1mm, 500μm and 300μm sieves. The residues were then scanned wet under a low-power Leitz binocular microscope.

Plant identifications were made using the reference collection of the Pitt-Rivers Lab., Dept. of Archaeology, University of Cambridge. All nomenclature follows Stace (1997) for plants, and Pfleger and Chatfield (1983) for molluscs.

Clearly intrusive plant and insect remains occur in low quantities in many of the non-waterlogged samples, particularly of Chenopodiaceae, *Stellaria media, Picris echioides*, *Hypericum* spp., *Rubus fruticosus* agg. and *Carduus/Cirsium* sp. The presence of these taxa within the waterlogged contexts should therefore also be treated with caution where they also occur in low amounts.

Shells of the land snails *Vallonia excelsior/pulchella* and *Trichia* sp. occur in low to moderate quantities in many samples, but their shell condition (glossy, semi-opaque) suggests they may be intrusive. The shells of the burrowing snail *Ceciliodes acicula* are common and clearly intrusive. Many contexts do contain very low quantities of potentially archaeological mollusc shells. The mollusc remains were not quantified or examined in any detail, since the low numbers and intrusive material would severely

limit any interpretation. The occasional presence of water-associated taxa was noted however.

Quantification And Results

Waterlogged contexts were scanned, and a broad summary of the contents created (Table 2.2). All charred plant remains have been fully quantified. Where samples were exceptionally rich, the flot was divided using a riffle box until a suitably-sized fraction was obtained. Sorting of the heavy residues recovered very few charred plant remains, and so the values within Table 2.3 are derived solely from flot material. Cereal grains were quantified by their embryo ends, in order to create a minimum number of grains. However where very low quantities of grain were present. Cereal chaff was quantified by glume bases and spikelet forks for hulled wheats, and by rachis internodes for free-threshing cereals. Seeds were counted by the presence of their attachment point, or other clear identifying characteristic (i.e. pairs of cotyledons for legumes) in order to create a minimum number of seeds. Full raw-data sets for the botanical remains are listed within Lucas and Whittaker (2001).

Waterlogged Material

Preservation by waterlogging is only present within very specific areas of the site, which are grouped here into broadly 'northern' and 'central' zones (see below, especially Figure 2.9 for zoning of the site). Many other non-waterlogged contexts contain material that indicates damp or flooded conditions in the past; mineralised seeds of duckweed (*Lemna* sp.), a plant of stagnant water, and occasional shells of slum or marsh mollusc taxa, including *Lymnaea trunculata*, small Planorbidae, and Succineidae (Evans 1972) are the most common examples. Amphibian bones were also recovered from many of the heavy residues, showing that suitably damp and shady locations were once present. The site appears to have been consistently damp in the past, with many deeper contexts experiencing at least seasonal waterlogging.

The few waterlogged contexts provide a limited coverage of the individual site phases, particularly the Iron Age (one example), and the importance of location has become apparent through the spatial grouping of waterlogged contexts. As a result of these characteristics only broad variations within the assemblage may be examined. The major patterns are discussed below by area (see Figure 2.4)[1].

The Northern Contexts

Five features within the northern part of the site contain significant waterlogged remains (Table 2.5). The earliest sample, from Iron Age pit F5621, is characteristic of a wet, shady and relatively undisturbed environment. There are large numbers of fruits of wood sedge (*Carex sylvatica*) and of rushes (*Juncus* sp.). Other taxa occur in much lower quantities, and include seeds of common-spikerush (*Eleocharis palustris*), sedges (*Carex* sp.), lesser spearwort (*Ranunuculus* c.f. *flammula*) and a crowfoot type (*Ranunculus* subgen. BATRACHIUM indet.), which are all water-associated. Seeds of hedge or marsh woundwort (*Stachys sylvatica/palustris*) and bugle (*Ajuga reptans*) also suggest shade. A low number of taxa more commonly

[1] Full taxonomic listings in Lucas 2001.

associated with disturbed soils are present, including fat-hen (*Chenopodium album*), chickweed (*Stellaria media*), field penny-cress (*Thlapsi arvense*) and thistles (*Carduus/Cirsium* sp.).

The remaining four Roman contexts, representing pit F.5626, ditch F.5470, ditch F.5624 and ditch F.5480 are similar in their range of taxa. Numerous seeds of elder (*Sambucus nigra*) with stinging nettles (*Urtica dioica*) are present in all cases, and both plants are characteristically ruderal (of disturbed, particularly nitrogen-rich/manured soils). In [4215] Phase I there are numerous bramble seeds (*Rubus* subgen. *RUBUS*), occasional three-nerved sandwort (*Moehringia trinervia*), and dogwood (c.f. *Cornus sanguinea*), which suggests a slightly overgrown and shaded environment. The other Roman contexts, contain very few bramble seeds, but do include a range of shade/wayside-associated plants including white bryony (*Bryonia dioica*), hemlock (*Conium maculatum*), wild angelica (*Angelica sylvestris*), white or red deadnettle (*Lamium album/purpureum*), and ground ivy (*Glechoma hederacea*). Other taxa which are relatively continuous between the three contexts include blackthorn (*Prunus spinosa*), and hedge or marsh woundwort (*Stachys sylvatica/palustris*).

The most striking contrast between the one Iron Age context and those from the Roman period is the dramatic increase in ruderal taxa. The shift in ecology may be directly linked to the growth of the Roman settlement, with vegetation clearance and input of nitrogen-rich waste (either human or animal) into the local environment.

Scrubby vegetation, dominated by elder with stinging nettles, brambles, occasional blackthorn and accompanied by a range of smaller damp and shade-loving plants of disturbed soils were present. The contexts indicate a disturbed, but regenerating area on the northern periphery of the Roman settlement. In the Iron Age this land had been much more shaded by vegetation, and from the lack of ruderal taxa, relatively undisturbed by human activity.

The Central Contexts

Three good waterlogged contexts have been identified from structures within the main enclosure (Table 2.6). Ditch F5651 and post-setting F5707 are compositionally very similar. The main plant taxa are buttercups (*Ranunculus acris/bulbosus/repens*), with lesser amounts of creeping cinquefoil (*Potentilla reptans*), swine-cress (*Coronopus squamatus*) and occasional greater plantain (*Plantago major*) all suggesting rough, short grassland. Evidence for disturbed, nutrient-rich soils includes numerous seeds of orache (*Atriplex patula/prostrata*), and low amounts of elder, stinging nettles, chickweed (*Stellaria media*) and deadnettle (*Lamium album/ purpureum*). Individual cases of water-associated taxa, including sedges (*Carex* spp.), mint (*Mentha* sp.), crowfoot (*Ranunculus* subgen. BATRACHIUM indet.) and common meadow-rue (*Thalictrum flavum*) together indicate intermittently damp conditions. Both contexts contain numerous egg cases of water flea (*Daphne* sp.) suggesting stagnant water within those features.

The 'shrine' context [4649] includes a wide range of taxa clearly linked to open or disturbed land, including creeping cinquefoil (*Potentilla reptans*), red goosefoot (*Chenopodium c.f. rubrum*), and parsley-piert (*Aphanes arvensis*). Numerous seeds of

celery-leaved buttercup (*Ranunculus scleratus*) also suggest wet and open conditions, and stinging nettle (*Urtica dioica*) again occurs in some number, which indicates disturbed nutrient-rich soil. The virtual absence of elder and complete lack of bramble or blackthorn within this context provides the strongest evidence for a cleared environment in association with the Roman settlement.

Overall the three contexts suggest the main enclosure was kept clear of larger vegetation, with open rough or trampled short vegetation. Buttercups were common with creeping cinquefoil and other short herbs, in suitable less trampled areas nettles and thistles sprung up. Like the northern zone ruderal plants were still common, but shade-associated taxa virtually absent.

Discussion

The waterlogged contexts are summarised in Figure 2.5 by the ecology of the main plant taxa present (those represented by more than two items, usually seeds). Since samples were scanned rather than sorted, the percentages are schematic and not based on true counts[2]. During the Iron Age the local environment appears to have been wet, shady, and relatively undisturbed. Plant remains from the northern periphery of the Roman settlement show a continuously scrubby and damp environment. The many ruderal taxa indicate the land had been disturbed, but that the vegetation was regenerating. Nitrogen-enrichment, either from human or animal waste, had also significantly affected the flora present. In contrast, the central area of the site although still damp, and with open and disturbed land plants, was clear of larger vegetation. The ground was covered with plants tolerant of trampling and lack of shade. Similar local environments, with numerous ruderal plants, have been identified at many rural Roman sites including New Hall, Cambridge (Fryer & Murphy 1996) and Stonea Grange (Van der Veen 1996).

Pollen Analysis (R. Scaife)

Three Romano-British sediment sequences have been assessed for their sub-fossil pollen and spore content (see Figure 2.4). These profiles come from two large, deep pits, possibly wells or water-holes (F5474 and F5436) and from an old land surface/buried soil (F5033). If present, it was anticipated that pollen might provide useful information on the past vegetation ecology and environment of the site. Pollen and spores were indeed recovered from all of these profiles although in varying degrees of preservation and absolute pollen frequencies. The results of this assessment analysis are presented here.

A total of 16 pollen samples were examined from the three monoliths (F5033; F5474; F5436). Sub-samples of 3ml. volume at 4cm intervals were prepared using standard techniques for the extraction of the sub-fossil pollen and spores (Moore and Webb 1978; Moore *et al.* 1991) with the addition of micromesh sieving (10u) to aid the removal of the clay fraction. Absolute pollen frequencies were calculated using added exotics to known volumes of sample (Stockmarr 1971). Pollen was identified and counted using an Olympus biological research microscope fitted with Leitz optics.

[2] Calculations and listings of w.l. taxa in appENV2

For the old land surface (F5033) a pollen sum of 300 grain of dry land taxa plus all extant spores and pollen of marsh taxa (largely Cyperaceae and *Alnus*), fern spores and miscellaneous pre-Quaternary palynomorphs was counted. Where pollen preservation was poor in the pit profiles F5474; F5436) a sum of 100 grains per level was adopted. An extensive reference/comparative collection of modern taxa was available to aid identification. Pollen diagram(s) have been calculated and plotted using Tilia and Tilia Graph. Percentages have been calculated as follows:

Sum =	% total dry land pollen (tdlp)
Marsh/aquatic =	% tdlp+sum of marsh/aquatics
Spores=	% tdlp+sum of spores
Misc.=	% tdlp+sum of misc. taxa.

Taxonomy in general follows that of Moore and Webb (1978), Moore *et al.* 1991 modified according to Bennett *et al.* (1994) for pollen types and Stace (1992) for plant descriptions. These procedures were carried out in the Palaeoecology Laboratory of the Department of Geography, University of Southampton.

The Pollen Data

There is a broad similarity between all of the profiles examined excepting that the pollen present in the old land surface (F5033) with higher absolute pollen frequencies and was in a better state of preservation. In this profile, the substantial numbers of Lactucoideae (dandelion types) are well preserved. In the pit profiles a large number of grains of this taxon were degraded and as such, this typically indicates differential preservation of this robust pollen type. The former soil profile is considered to show less differential preservation. The characteristics of the three profiles are described as follows.

Profile F5033 <220> Old land surface (Figure 2.6): This profile has the best pollen preservation and highest absolute pollen frequencies (to 80,000 grains/ml at the base). The profile was also the most taxonomically diverse (40 taxa). As with all of the sequences, herbs are dominant with extremely few (<1%), sporadic occurrences of trees (*Betula, Pinus, Ulmus, Quercus* and *Alnus*). Herbs are dominated by pastoral taxa with Lactucoideae most important and increasing from 35% to 55% at the top of the profile. Whilst there is some possibility of increasing differential preservation upwards through the profile, the pollen was on the whole well preserved. There is little evidence of any marked differential preservation in the lowest levels. Poaceae are also important (to 34%) at the base of the profile and decrease upwards. Other pastoral taxa are also present and include *Plantago lanceolata* (15%), *Ranunculus* type, *Dianthus* type *Trifolium* type and *Centaurea nigra* type. Cereal pollen and weeds of disturbed ground and agriculture are also present but only in small numbers (e.g. *Polygonum aviculare* type, *Artemisia*, *Spergula* type, Chenopodiaceae). A small number of marsh herbs are present in the upper level including Cyperaceae and *Typha angustifolia/Sparganium* type.

Profile F5436 <97> Roman well/water-hole feature (Figure 2.7): Pollen was generally sparse and poorly preserved with evidence of differential preservation (especially degraded Lactucoideae). APF values are highest in the basal level (48cm) with values to 8,500 grains/ml. As with the other profiles, tree and shrub pollen are minimal with only small numbers of *Betula, Pinus, Quercus, Tilia* and *Alnus*. *Corylus avellana* attains 6% in the top and basal samples only. Herbs are dominated by Lactucoideae (to 58%), Poaceae (to 42%) and *Plantago lanceolata* at the base (15%). Overall, herbs of pastoral affinity are most important but with small numbers of ruderals/segetals (weeds and plants of disturbed ground) also present. The latter include *Sinapis* type, *Chenopodium* type, *Polygonum aviculare* type, *Plantago major* type, *Artemisia* and also the spores of *Pteridium aquilinum*. In the upper half of the profile there is a sharp increase in derived pre-Quaternary pollen and spores and Hystrichospheres (dinoflagellates).

Profile F5474 <141> Roman well/water-hole feature, AD60-140 (Figure 2.8): Pollen is poorly preserved with clear evidence of differential preservation with degraded Lactucoideae being dominant (60-70%) throughout. APF values are small being from 3,000-6,000 grains/ml. However, there is also a range of better preserved pollen exhibiting some taxonomic diversity. Cereal pollen is more important in this than in the other profiles examined (to 6% at the base) with segetals including *Polygonum aviculare* type, Chenopodiaceae and *Sinapis* type. Poaceae and other pastoral taxa are, however, relatively more important including *Plantago lanceolata* (4%). There are few trees and shrubs with only sporadic records of *Betula, Quercus, Fraxinus, Alnus, Rubus* type and *Corylus avellana* type. Spores are dominated by *Pteridium aquilinum* (av. 20% with a peak to 40%) with lesser numbers of monolete (*Dryopteris*) type, *Polypodium vulgare* and occasional *Sphagnum*.

Discussion and Inferred Vegetation

The taphonomy of pollen in such well or water-hole features is complex and there have been few studies with which to compare the data obtained from Vicar's Farm. Studies at Peterborough (Scaife in French 1994) and Honiton, Devon (Scaife 1999) are, however, comparable in demonstrating the presence of open herbaceous environments and have raised the question of pollen taphonomy in such features. Pollen derived from 'normal' airborne means or insect vectors is likely to derive from areas close to the site. However, given the archaeological nature of these features such contexts are also highly likely to contain pollen from secondary sources. These may be varied and include pollen contained in human and animal faeces, offal, domestic waste including floor coverings and food remains. These may strongly skew the pollen assemblages (Greig 1982). The presence of such secondary/derived pollen complicates the interpretation since the possibility of the overriding dominance of the secondary pollen may have masked 'naturally' derived assemblages from which interpretations of the local environment can be made.

Furthermore, of the possibility that much of the pollen has been introduced into these contexts via secondary routes or from on-site and immediately local sources, it is possible that pollen from the surrounding environment will be proportionally under-represented. This is especially pertinent to the woodland and shrub component since pollen percentages are calculated here as a percentage of the total pollen including the extremely high percentages of Poaceae (grasses) which suppresses the percentage of other 'within sum' taxa. The extent and importance of such woodland elements remains unclear due to the taphonomic questions posed. To establish the general vegetation habitat, pollen analysis of a nearby wetland site with peat would be desirable to act as a comparison with the on-site contexts.

As part of this assessment it was hoped that the pollen sequence obtained from the old land surface (F5033) would provide a longer temporal sequence and thus picture of environmental change. Whilst this may be true, the environment throughout was clearly one of dominant herbs of pasture with Poaceae (grasses), Lactucoideae (dandelion types), *Plantago lanceolata* (ribwort plantain), *Trifolium* type and *Medicago* type (medicks and clovers) and Ranunculus type (buttercups). The fact that the pollen of these is present suggests that the pasture was not closely cropped/grazed. The number of trees is minimal and as such, it seems likely that the area around the site was open agricultural land. Even though the pollen catchment of such soil profiles may be of local extent (Dimbleby 1988) it is likely that if woodland was present, higher APF values would be recorded (especially oak and hazel). It is possible that cereal pollen and possibly associated herbs/weeds of cultivation could

have been derived from areas of cultivation at some distance or from secondary sources noted such as crop processing liberating pollen trapped in cereal husks (Robinson and Hubbard 1977) or even from animal feed and dung.

Of the two well profiles, F5436 <97> is in phase II while F5474 <141> in phase I. For F5436, while there has been differential preservation in favour of robust pollen types such as Lactucoideae, there remains clear evidence for the predominance of the pastoral habitat also evidenced in the old land surface profile (F5033) with only minimal evidence of arable activity. The upper levels of this feature contain pre-Quaternary palynomorphs derived from the local bedrock and imply sediment inwash and possible reworking of pollen. Thus, the lower part of the profile may be more representative of the local habitat. A single record of the intestinal parasite *Trichuris* may also suggest the presence of faecal material in the upper sediments. This would be commensurate with the possibility that this was a water-hole. It is, however, unfortunate that more substantial numbers were not present! Well F5474 <141> is also broadly comparable with the old land surface and well profile F5436 in clearly showing a pastoral environment. There is, however, one difference with higher values of *Pteridium aquilinum* (bracken), which may suggest abandonment and/or waste ground in this area of the site.

Pollen and spores have been recovered from the two well profiles and the old land surface. The latter has the best pollen preservation from which data on the local vegetation environment has been forthcoming. The well features have poor pollen preservation and a degree of differential pollen preservation as indicated by abundant but degraded Lactucae (dandelion types). The taphonomy of such features and soil profiles is complex and the pollen catchment may be representative of only the on-site and immediate area. In spite of this, useful information has been obtained from all of the profiles. These exhibit a strong pastoral component/habitat with little evidence of trees and shrubs growing in the immediate area. A small arable element is also present but may have derived from domestic waste, animal ordure, feed, crop processing or directly from cultivation.

Deposition of Cultural Material

Finds Densities

The density of features on site the site is fairly apparent from the plans, and it would seem probable that the density of finds should more or less match this. To provide some coarse spatial control of the site, both in terms of finds distribution and discussion of its features, the Roman site has been divided into five zones or areas (A-E), and although it is recognised that such divisions are partly limiting, they do provide a baseline for further discussion (Figure 2.9). The site has been divided into these five areas according to major boundaries; not all the areas are active in all periods (see below), but they do remain more or less coherent as divisions.

Area A – The core of the settlement and the focus of domestic and other activities involving people take place. It persists as the core area throughout the Roman period and although internally it is subject to changing sub-divisions, there is an enduring distinction between the eastern and western halves, marked by the diagonal line of a

boundary ditch/pathway. Within the western half, there is further subdivision, in particular between the northern side where the cremation cemetery (and later pitting) lie and the southern side occupied by the aisled building and roundhouse. Between these two lies the shrine.

Area B – This area only comes into existence in Period II as a southern extension to the core of the settlement and it has a tripartite internal division. It would seem to form the focus of some domestic and/or ritual activity as well as, perhaps, containing livestock.

Area C – Created in the final period (III), this is most peripheral zone of the settlement, consisting of a large enclosure and smaller sub-enclosures, probably all related to animal husbandry or other agricultural activities.

Area D – This is initially a distinctly separate field system lying at the southern edge of the site, laid out in Period II and perhaps related to another settlement east of the limits of excavation. Only in Period III is it integrated with the main settlement on the site when part of it is also used as an inhumation cemetery.

Area E – This covers the northern area of the site, bisected by a major droveway into western and eastern sides, each of which are, at various points, divided into small enclosures.

If one takes these spatial divisions of the site and quantifies the more common finds (pottery and bone) by area, the inference of finds densities is borne out (Table 2.7). The amount of pottery and bone (by count and weight) decreases as one moves southward from Area A to Area D, i.e. successively further from the core. North of the core in Area E, the figures for both pottery and bone are comparable to Area C.

However, excavation bias might be affecting these figures insofar as the intensity of excavation in the core might be greater than at the margins and this could result in more finds being retrieved. The greater intensity of excavation may of course be reflecting the greater intensity of features, nevertheless one might still question whether there should be a correspondence between density of features and density of finds, and as this need not be the case, we need to factor this out. Many methods could be used to achieve this – ideally, one might compare density of finds against volume of associated deposit excavated, but this is a complex and very time-consuming method. However, using the heavy residues taken from bulk samples will give some indication, as this offers the most controlled form of recovery. Table 2.8 shows the average quantity of pottery and bone in grammes per litre of soil, based on samples in Areas A (21 samples), B (9) and D (9); no data is present for Area C and Area E produced only 3 samples, and one of these had an unusually high quantity of pottery which skews the results. Albeit a small sample size, it at least confirms the impression that finds density is greater in the core and drops off further away.

As a further check however and using all bulk finds of pottery and bone, we can compare the densities expressed as a mean for each area against the site mean. This compensates for any individual variability between the size/volumes of excavation slots or features (Table 2.9). To avoid issues of fragmentation (but see below), only weight has been used in this measure, and it clearly shows the same trend, that

moving out from the core, the mean quantity of finds per context decreases, dropping below the mean in areas D and E. The same can be done at the level of excavation unit or slot; Figure 2.10 shows the total number of pottery and bone by weight for each slot expressed as a statistical value: below mean, and then to 1, 2 and 3 standard deviations, and finally above 3 standard deviations. The total numbers from all excavation units was used as the measure. The figure clearly shows that the higher densities of material lie in the core and also gives a more detailed resolution in terms of spatial densities than lumping the quantities together by area, although in doing so, it is more affected by the volume of deposit excavated. As a final check, two transects were taken through the site, a north-south and east-west one, by 10m squares and the total numbers of pottery and bone retrieved from contexts within each 10m square was divided by the number of excavation slots (Figure 2.11-2.12). Again, the same trend is apparent, and from all these different methods, it seems safe to assume that the greater density of finds in the core is reflecting actual deposition rather than excavation bias.

Taphonomy

As well as considering sheer density of material, its condition also needs some consideration; organic preservation was fairly poor except in a few waterlogged contexts (see Ballantyne, above), but then while some unworked wood occurred in these contexts, there was little else save plant remains. Bone preservation was variable, but tended to be better in the core than on the clay margins, and shell was also preserved fairly well. All inorganic remains survived well and were not subject to any major chemical/environmental degradation. Beyond soil conditions, more general physical/mechanical processes were the major factors affecting the preservation of finds. Using the two most common finds, pot and bone, as indices of taphonomic processes, we can start to qualify the finds distributions.

Animal Bone (with A. Clarke)

An assemblage of 10409 bone fragments was recovered from the site by means of hand excavation and environmental flotation. Where it was possible to confidently ascertain that a group of fragments originated from a single bone, they were grouped together and counted as a single element, i.e. 100 fragments from a broken skull were counted as 1 bone. The site contains occupation evidence from the Iron Age, Romano-British and post-Medieval periods, however due to the complexity of the site it was not possible to assign a phase to the entire assemblage. As a result, analysis will only deal with those bones that have been confidently phased, reducing the analysed assemblage to 9610 fragments. Of these, 4570 (48%) were identifiable to species.

All the bone was identified using the reference collection of the Department of Archaeology, at the University of Cambridge, and where possible each bone was identified to species and to element. Each bone was recorded according to the diagnostic zone method (Dobney and Rielly, 1988) in an effort to avoid any repetition and enable more accurate calculation of statistics. The differentiation between the remains of sheep and goats was carried out using the above mentioned reference collection and according to the accepted criteria established by Boessneck (1969). It was only possible to confidently identify 9 goat bones; all other ovicaprid remains are quoted as sheep. Where they appeared in articulation, ribs and vertebrae were also

identified to species; otherwise these elements were grouped as cow or sheep size. This method was also used for unidentified fragments of long bone shafts.

Estimation of age at death was calculated for the four major domestics. Tooth eruption and wear was recorded according to the methods of Grant (1982), Halstead (1985), Levine (1982), O'Connor (1991) and Payne (1973). Stages of epiphyseal union were also recorded according to the criteria of Getty (1975). Where it was possible to do so, all the identified mammal bones were measured according to the accepted standards (von den Driesch, 1976). It was possible to retrieve a fair amount of data but unfortunately not in sufficient quantities to warrant a full metrical analysis. The measurement data is available for inspection in the site archive.

Condition of Assemblage and Site Formation

The majority of the bone assemblage is in a fair to good state of preservation allowing data such as the amount of carnivore gnawing or butchery marks to be easily observed and recorded. Having said that however, the bone although well preserved is in a fragmentary state having undergone a high degree of processing and bears all the hallmarks of refuse, from the slaughter of animals to meal waste. Bearing in mind the amount of identifiable remains contained within the assemblage (48%), it would appear that the bone suffered very little further damage (apart from canid gnawing) and was preserved more less in-tact once deposited in the various enclosure ditches, pits, wells and other features that make up the site.

Evidence of gnawing either in the form of puncture marks or scratches was recorded whenever they were visible on the bone surface. The percentage of bone in the assemblage affected by gnawing was calculated and is shown in Table 2.10. The percentages are clearly quite high, a factor that no doubt accounts in part for the low numbers of small bones, such as phalanges, carpals and tarsals recovered. Added to this, the ageing data based on bone fusion is also very low, which again in probably a result of dogs destroying the diagnostic ends of long bones.

Spatial Analysis

Table 2.11 shows the areas of the site according to the degree of completeness of minimum number of elements, using the number of zones present on any individual element as the measure of its completeness. The results are unequivocal; the further out from the core of the site, the more fragmented the bone is. This is confirmed by a proxy indicator of essentially the same phenomenon – number of un-identifiable bone fragments. Table 2.12 clearly shows the percentage of un-identifiable bone increasing as one moves further from the core, suggesting it is more fragmented.

Roman Pottery (with G. Monteil)

The Roman pottery assemblage is a very large group composed of 11,946 stratified sherds, at a total weight of 206.31 kg but a relatively low EVEs count of 144.45. As independent dating evidence (i.e. samian, stratified coins or well-dated pottery) is scarce and most of the deposits are not primary, the phasing was therefore kept broad. Although a few groups can be dated as early as *c.* 60-90 AD, the main part of the Roman pottery is of a late date as most of the pottery belong to the last two phases of the site. The bulk of the assemblage is of a domestic nature save however the few cremation and inhumation groups and potential 'ritually' deposited vessels.

For each context, the pottery was sorted by unique combination of fabric and form then the sherds counted and weighted and EVEs recorded (Estimated Vessels Equivalent, based on rims only). Unless stated otherwise, all weights are given in grammes. The data were initially recorded on *pro-forma* recording sheets, later computerized. Each record had several field entries: vessel form (general and specific), fabric type, sherd count, weight, EVE, diameter, residues (e.g. limescale, burnt food) and functional class (i.e. storage, cooking, service or preparation), in addition to contextual fields (context, slot, feature, group and phase). Where possible, established form and fabric type series were used as references (Tomber & Dore 1998), while the local coarsewares were ascribed much broader generic types, to speed up the recording.

Condition of Assemblage

A large part of the assemblage is made up of abraded and small to very small sherds, which makes the identification of forms quite difficult. The brokenness of the total assemblage is indeed high with a value of 82.69 (sherds/EVEs), which illustrates the high activity carried out on site throughout and the lack of primary contexts and groups. Several sherds were subjected to secondary use and were found reworked and/or perforated (*viz.* spindlewhorles in [1729], [1739], a possible counter in [1714], and perforated sherds in [4165]).

Spatial Analysis

Unsurprisingly, the same patterns which occurred with the animal bone are repeated with the ceramics (Table 2.13). Using a similar measure of completeness, the pottery shows a clear trend to greater fragmentation away from the core, a pattern also shown by average sherd weight, which though affected by vessel size, is less variable than for animal bone.

Discussion

Analysis of the quantity and condition of both the pottery and bone assemblages suggest something of the nature of waste disposal on site. First, the greater amount of bone and pottery remains in the core where it was presumably consumed, suggesting that there was no concerted attempt to remove rubbish out to the margins of the settlement. Second, whatever attritional processes are affecting the finds, they are common to all types and probably relate to post-depositional factors such as weathering, trampling and other animal action. In short, it appears as if the finds are in

better condition (i.e. less fragmented) at the core than the periphery. This might seem a little unusual insofar as there would have been greater activity (e.g. movement, trampling) here than on the margins. Yet given the fact that rubbish did seem to stay in the core, proper management would seem all the more imperative and thus it is possible that the material in the core was preserved from attrition by being kept away from areas of movement – such as the edges of the enclosure ditches. Indeed, there were high finds densities locked within the extant, buried Roman soil horizons, comparable if not higher to those recovered from cut features suggesting surface middening within the core was practiced as much as discard into cut features (see Table 2.14) – in fact deposition in the cut features was probably a by-product of middens being sited close to their edges, particularly ditches.

Concluding Summary

The various artefactual and environmental data from the site provide some key aspects to framing our understanding of the archaeology. While preservation has been severely truncated, as on most rural sites, through ploughing, there is sufficient evidence to sketch a general reconstruction of the lost upper horizon. Macroscopic plant remains and pollen both indicate an open, grassy and weedy landscape, created probably through human clearance as the settlement was established. In the late Iron Age, this area was much more shady and shrubby. The old land surface from the Roman period was preserved in several places, chiefly in the broad basin at the centre of the site where there was a buried soil and remains of cobbling and gravelled surfaces. In a few other places across the site - mainly west of the basin, similar surfaces/patches of gravelling occurred. Even if these have been truncated, it does not suggest there was much depth of soil cover over the core of the site. Indeed, the buried soil in the basin was only m thick. In the transition from phase II to III, the dark earths which cover the core of the site seemed to have started to form – certainly some of the late features cut through this dark earth, which also infills the upper part of earlier ditches and all of some of the later ditches. Although the dark earth has been physically characterized as primarily a creation of the background soil enhanced by carbonized organic fines, why this has occurred remains ambiguous. Unquestionably such enhancement may have an agricultural purpose, as it clearly does on many sites, but it is hard to see how this can be the case here; the dark earths form while the site is still in use as a settlement, and there is no evidence for any re-use of the site for arable farming until at least seven centuries later. The creation of the dark earth at this site may alternatively be a product of the deliberate scattering of ashes in order to keep the open ground in the settlement core, as dry and well drained as possible under increasingly wet ground conditions. Deposition of other cultural material such as food waste and broken pottery also seem to concentrate in the core suggesting surface middens and the use of defunct ditches as locales for rubbish disposal. Certainly there is no evidence of rubbish having been moved out to the margins of the settlement.

Chapter 3 Phase I (AD80-180)

This and the next two chapters discuss the Roman settlement by phase, the discussion following the area divisions as laid out in chapter 2 and within that, by Group and Feature; individual contexts are discussed only rarely but a full index can be found with the site archive. Basic presentation of all features is described with, where relevant, associated discussion of faunal, environmental or artefactual data. Phase I (AD80-180) sees the establishment of the core settlement and many of its internal features such as the shrine, timber building and cremation cemetery. The main groups and features for Phase I are shown in Figure 3.1.

The Core Settlement (Area A)

Main Enclosure

The main enclosure defining the early Roman settlement is a rectangular ditched system with opposed entrances on the north-eastern and south-eastern sides, enclosing an area of *c.*105m east-west by *c.* 65m north-south (6825 sq.m/0.68 hectare; G2). Its establishment is hard to date precisely, it could be as early as c. AD80, but also as late as c. AD140. It is tempting to see it as a slightly later formalisation of the settlement in phase I, perhaps contemporary with the aisled hall (see below). A number of ditch lengths make up its circuit which although varying slightly, on the whole span *c.*2m in width and extend 0.5m deep below the natural. On the eastern side of enclosure extra ditches had been cut on the inside: F8162 (0.5m wide, 0.42m deep, dated AD80-140), first, then F8163 (1.2-1.7m wide, 0.2-0.4m deep, dated AD60-110 and 90-140), as a re-cut. From the associated pottery dates, they are fairly contemporary both to each other and may even pre-date the main enclosure ditch. The internal organization of the main enclosure is rather informal, indeed many of the internal divisions shown on the plan (Figure 3.1) may even precede the main rectilinear enclosure (G2). On the eastern side is a large, square space or sub-enclosure (G2.08) demarcated by ephemeral gullies while on the western side, similarly ephemeral gullies enclose a long rectilinear area (G2.03). Most of the features lie in the central area, including the cremation cemetery, aisled hall and shrine (see below).

Plant Remains (R. Ballantyne)

Two samples were taken from main enclosure ditches: F5543 and F5470. The latter was waterlogged and plant macro-remains show the land was once damp and scrubby, containing some water-associated plant taxa, suggesting that these features were at least seasonally wet. There is also good evidence for nitrogen-enrichment of the soil, either from human or animal waste[1]. However, both ditches contained negligible charred remains, mainly of cereal chaff, in densities well below 1 item per litre soil.

The Interior

A number of short gullies occur inside the enclosure from its inception. On the eastern side is a large space semi-/fully enclosed by various ephemeral gullies (G2.08). At the southern entrance to the enclosure, was an L-shaped ditch (F5554/G2.14), 0.7m wide

[1] Discussed in detail within 'local environment' section.

and 0.2m deep, dating to AD60-90. On the northern side of this space are two sections of gully, F5719 (0.6m wide, 0.2m deep, dated to AD140-240) and F5699 (0.5m wide, 0.2m deep). There are a few small pits/postholes (F4692, F4693, F4694, F4695, F4696) on the inner side of ditch F5719, but only one produced any dateable pottery (F4692, c. AD60-240). On the western side, one group (G2.03) 'encloses' the shrine and cremation cemetery and separates them from the domestic area of the settlement to the south and west. It comprises ditches F5531, F5612, F5613 and F5587, which are all very shallow features. The western line (F5612 and F5613) was only 0.6m wide and 0.19m deep, while the southern ditch (F5531) was only slightly more substantial: 1m wide by 0.36m deep, dated AD60-90. The eastern side represented by F5587 was 1m wide and 0.2m deep. Two shallow pits (F5617 1.6m wide, 0.2m deep; F5618, 2.4m wide, 0.2m deep) occurred alongside.

Ditch F5267 (2m wide, 0.6m deep, dated AD140-180/200) runs northwest-southeast in a slight arc in the centre of the settlement; its purpose is not immediately obvious as it appears isolated, however if it marks the line of an associated bank, fenceline or hedgerow, then it might be acting as a screen or barrier between the northern entrance and the timber shrine, either obstructing the line of sight or deflecting direct access. Probably cut in the mid 2nd century, this ditch and the others were probably all backfilled as this central area was re-organized in the mid-late 3rd century, with ditches separating the timber shrine and cremation cemetery from the aisled building.

The earliest focus to the site would seem to be dominated by the three elements: the cremation cemetery, the shrine and the aisled building. There are of course striking features about this configuration – the presence of a cremation cemetery inside the settlement is perhaps a little unusual, though the fact that the shrine occupies the middle ground, could be read metaphorically as well as literally. Moreover, there is a chronology which can also inform on the relation between these three elements. The shrine and the cremation cemetery can both be dated back to the late Flavian (c. AD80/90), while the aisled building is no earlier than Hadrianic (c. AD120). These dates are of course open to interpretation insofar as they give a *terminus post quem* and not an actual origin date for the feature.

Aisled Timber Hall

An aisled building (G2.01; figure 3.2) was situated centrally along the back/southern edge of the enclosure, and defined by two parallel rows of postholes (western line: F428, F5225, F5340, F5239, F5240, F5238, F5237; eastern line: F540, F543, F546, F640, F643). Possibly also associated are F371, F5284 and F756 on the north side, and on the south, F5257, F5258, F744 and F729. No wall lines or floor survived due to long-term ploughing but its overall proportions can be estimated at c. 17m long by c. 8m wide. Most of the postholes are over 0.5m in diameter cut at least half that depth into the natural (see Table 3.2); in many instances post-pipes survived indicating timber diameters of c. 0.3m. The postholes were packed with stones and the earliest pottery in the postholes suggests a *terminus post quem* of AD 120 for the construction of the building. Dating its abandonment is rather more difficult.

Pottery in one of the post-pipes dates to after the mid 3rd century, but this only gives a very broad late date for removal of the post. More secure is the cutting of a later well in the mid-3rd century (see Chapter 4, F5280) which clips one of the postholes.

However, this does assume that the well could not be inside the structure; yet this is not an impossibility. If the well does presume the abandonment of the hall, then the building only stands for about a century (i.e. AD120-230), and thereafter, this whole space remains empty until the mid 4th century when ditch F5006 cuts through this area. Given that this space seems to be a prime part of the settlement, it seems unlikely it would not have been used given the amount of other activity all around it, and it is more likely that the hall stood right through into the early part of phase III until ditch F5006 was cut. This means either the well was incorporated into the building or the building was shortened, so only its southern half stood. Certainly, the number of subsidiary postholes around the southern end would suggest at least that the hall was repaired or maintained over time. Thus it seems likely the hall remained standing in some form or another for two centuries rather than one.

A phosphate survey was conducted over the area of the aisled hall on a 2.5m grid; although much of the area was 'contaminated' by later features, the signals did not register particularly high in terms of the site background (Figure 3.3; Middleton 2001). As Middleton points out: "If, for instance, the barn had been used for stock keeping, one would anticipate much higher levels than have been revealed by the analysis. The levels observed are more consistent with a general reflection of the high phosphate levels in the area ..." (Middleton 2001).

The Faunal Remains (A. Clarke)

Only 15 fragments of animal bone were recovered and apart from two isolated and loose molar teeth, one from a cow and one from a horse, all the bone was unidentifiable. This situation is not all together surprising as it is assumed that the bone fragments either formed part of the original post-packing or part of the back-fill of the post-holes once the building was abandoned at the end of phase I.

Pit Group

A group of pits (G2.04) cut just outside and to the south of the G2.03 division (and post-dating it) may be associated with the aisled building (G2.01; see Figure 3.1). They contained a large amount of ceramics in their backfill, which suggest a date of *c.* 90-140 AD (Table 3.3).

Faunal Remains (A. Clarke)

The pit group produced only 39 fragments of animal bone. The majority (74%) of these were unidentifiable. The identifiable bone consisted of the remains of cow, sheep, horse and chicken, which upon inspection could only be interpreted as domestic refuse as they were all classic waste bones and very fragmentary in nature.

The Plant Remains (R. Ballantyne)

Two pit contexts were examined, and are of quite different composition. Pit F.5500 includes moderate charred remains – 6 items per litre soil – that are primarily of glume wheat chaff with a number of wild seeds, but little grain. The seeds are mainly arable weed types, but there is also a noticeable range of wet ground taxa: rush (*Juncus* sp.), spike-rush (*Eleocharis* sp.) and sedge types (*Carex* spp.). These taxa

could represent a damp area of arable, or non-arable charred plant remains mixed in with the crop processing debris. Low amounts of small artefacts, including burnt flint and one eggshell fragment indicate that other sources of material are represented. The second pit, F5651, is lacking in all charred and small artefactual material other than a little small charcoal. Waterlogged seeds indicate an open area of rough grassland, including buttercups (*Ranunculus acris/bulbosus/repens*) and creeping cinquefoil (*Potentilla reptans*). One uncharred glume base is the only direct evidence for human activity. This context appears quite clean in contrast to pit F5500, suggesting that quite different formation processes have shaped the remains. Either the pits were of different purposes, or their setting was quite different, with one close to sources of artefactual debris and the other in a much 'cleaner' area.

The Pottery (G. Monteil)

The pottery assemblage from these pits is dominated by food preparation and storage vessels – jars, storage jars, mortaria with only small numbers of table wares – dishes, bowls and cups (see Table 3.4)

Roundhouse

In the south-west corner of the settlement enclosure were the ephemeral traces of an eavesgully (F5081), almost certainly associated with a roundhouse (G2.19). The eavesgully was 0.33m wide and 0.15m deep, and only surviving on its western side, the rest ploughed out (see Figure 3.1). It described a diameter of c. 5m.

The Timber Shrine

Adjacent to the aisled building lay a ring of postholes associated with pits and an enclosure ditch (G2.02; Figure 3.4). The post-circle described a diameter of 3.8m, made up of eleven main posts, with a number of subsidiary posts (Table 3.5). Three of the western postholes had packing stones of lava stone (F5507, F5517 and F5491). Only one posthole had dateable ceramics F5492 with four sherds dated to a broad range of AD45-120. A cluster of pits lay along the western side of the post-circle in its earliest use (Table 3.6); these may have been initially dug for the sandy silts to use in daub preparation, although better clays could have been extracted only *c.* 30 metres away to the south. Whatever their initial purpose, they were backfilled with rich midden material incorporating ceramics dating to *c.* AD80-160. Subsequent to this pit group and their backfilling, an enclosure ditch (F5522) was cut around the northern side of the post-circle (1.06m wide and 0.43m deep). Most of the ceramics in this ditch were undiagnostic in terms of a date, except for being generally early. One group post-dated *c.* AD240 ([3037]), but this material probably came from the upper fill.

Phosphate mapping was conducted across the whole shrine structure on a 0.5m grid (Figure 3.5). The results are not very significant – there is a slight fall-off in values on the eastern side with slightly higher values around the southern and western side, but this may simply reflect preferential location of deposition of cultural material. Certainly the quantity of charred plant remains seemed higher on the southern side than the north (see Ballantyne, below).

The Faunal Remains (A. Clarke)

There was very little bone material recovered during phase I and all the bone recovered came from a number of intercutting pits (F. 1908, F. 5512, F. 5472) and the larger pit F. 5519. Unfortunately, only 12 fragments of bone were recovered. The intercutting pits produced 8 of these bones, of which it was possible to identify only 1, being a fragment of pelvis from a male sheep. The remaining faunal material from this period came from the large pit F5519, numbering 4 fragments all of which were identifiable as the fragmentary remains of cow (skull and femur), horse (femur) and sheep (tibia). All of the bone from this period was in a fairly poor state of preservation, being fragmented and showing signs of carnivore gnawing, a state that fits with the interpretation of at least the pits being back-filled with midden material. A similar assemblage was recovered from the ditch enclosing the shrine to the north (F. 5522). Of the 13 fragments recovered only 3 were identifiable; a single cow astragalus and a sheep 1st phalange and loose molar.

The Plant Remains (R. Ballantyne)

Five contexts were examined (Table 3.7) and all the samples contain a high count-density for charred remains, although there is some variation in amounts within the shrine ditches. It is unfortunate that two of the samples are very small (1 litre) since their counts were subsequently low, although the density of charred remains is comparable to the larger samples. A charred by-product of crop-processing debris is suggested by the dominance of glume wheat chaff in all the contexts. The wild taxa are arable or disturbed land types and are probably weeds of the harvested crop. The consistently high amounts of charred crop-processing waste suggest that a source, of such debris existed nearby. Any activity pattern seems to have been maintained between Phases I and II. The very high charred counts from pit F.1909 may represent a specific deposit of waste within this context, or the feature acting as a trap for materials that were abundant on the surface. On the whole there is much greater densities of material in the later, southern ditch F5483/F5533 than the earlier, northern ditch F5522.

The Pottery (G. Monteil)

The pottery from the timber shrine (204 sherds, 3kg) does not display any particular or unusual signature (see Table 3.8) except an absence of drinking vessels. It shows a jar-dominated pattern but with high quantities of dishes and an absence of beakers and flagons. There were only 2 sherds of samian, but samian does not seem to have played a major role in ritual contexts (Willis 1998, 118).

Forecourt Area

An area between the timber shrine on the west, the aisled building to the south and the cremation cemetery to the north can be seen as a kind of forecourt or open space, and although fairly open, there were a few features occupying this space (G2.16). Many of these features are undated either by associated finds or stratigraphy and given this space remained in use throughout all phases, their dating must remain ambiguous. A post line runs north of the aisled building (Table 3.9). There are no dates but by association, it is probably contemporary with the building, providing a screen; it may

suggest that the forecourt area was more closely associated with the shrine than the aisled building. A group of pits occupy the edges of this open space (Table 3.10). Beyond these are a number of unphased are simply listed here: F5529, F5241, F697, F647, F5278, F600, F598, F5249, F5248, F5285, F460, F5275.

The Cremation Cemetery

A group of eight cremations (F795, F5572, F5035, F5119, F5120, F5121 and F5122) and 2 infant inhumations (F5266 and F2089) were clustered within an area c. 3.5 x 4.5m, close to, yet within the northern edge of the main settlement enclosure (G2.05; Figure 3.6). The area around the cremations was unusual and unique in that a heavy spread of iron panning occurred just in this spot. The mineralisation of the natural sands resulted in thick concretions around and to some extent, over the burials suggesting it had formed after they had been interred. Above the panning was the colluvium, which had formed much later (see French, Chapter 2). It seems unlikely that this mineralisation is unrelated to the cremations, given its localised nature, and the interpretation offered is that it indicates the presence of a mound over the burials. It would have formed as ground water came up and met a barrier of more resistant soil (i.e. the interface between the former land surface and mound, perhaps of clayey soil). Due to subsequent ploughing, the mound disappeared and all that remained was the truncated area of iron panning, subsequently sealed by the hillwash.

A magnetometer survey was carried out over part of the area and this revealed a major, discrete anomaly *c.* 15m to the east of the burials. There were no visible features but it seems likely to represent an area of burning, and has tentatively been identified as a ploughed out pyre site, especially as the visual affects of a pyre only penetrate to a shallow depth, *c.* 0.10m (McKinley 1997, 65). About 3m to the south of this magnetic anomaly was a large pit F5696 (*c.* 2.4m diameter, 0.5m deep), filled with a very dark black-brown silty matrix with abundant charcoal and burnt stone inclusions. Centrally beneath it was smaller pit/posthole F5697 (*c.* 0.6m diameter, 0.3m deep) backfilled with re-deposited natural sandy silts and clay sealing a basal layer of pure charcoal. The only relation of these pits to the magnetic anomaly is one of spatial proximity but the amount of burnt material in their fills was unusual and might suggest they are related in some way to the pyre site. Pit F5658 (0.48m diameter, 0.3m deep) lies just adjacent to the cremations, but contained no cultural material at all.

The Human Remains (N. Dodwell)

Eight cremation burials and two neonate inhumations were identified in this cemetery. The degree of disturbance or truncation, the condition of the bone, and, as important, which skeletal elements survive, effects the potential for determining the age and sex of individuals and of recognising any pathological conditions. This is true for both cremations and inhumations but in the former the quantity of observable bone and the fragment size can contribute to the understanding of the ritual and of pyre technology. The cemetery has been disturbed by ridge and furrow, later ploughing and to a lesser degree during machine stripping prior to excavation. There is only one burial where the quantity of bone has not been affected by truncation (F5035).

During excavation, the cremation burials and the fills surrounding the cremation urns were subject to 100% recovery as whole earth samples. Larger fragments of bone and those that appeared most fragile were collected and bagged separately to avoid additional fragmentation within the sample bag and during environmental processing. All these samples were wet-sieved and bone > 2mm was extracted for examination. The lesser residue was only scanned. A proportion of each sample was floated for the retrieval of environmental evidence. Only one vessel could be lifted whole and this was excavated in the laboratory and its contents treated in the same way as the fills of the burial pits.

All bone > 2mm was examined. Grave/pyre goods were recovered during excavation on site and in the laboratory. Animal bone (predominantly cremated/burnt) was also separated during analysis. These animal bones should be seen as a minimum number as many fragments were too small or undiagnostic to positively identify as either human or animal (see Clarke, below). General methods used in the osteological evaluation are those of Bass (1992), Buikstra and Ubelaker (1994) and Steele and Bramblett (1988). An assessment of age was based on the stages of epiphyseal union (McMinn and Hutchings 1985) and cranial suture closure. The following age categories are used in this assessment:

foetus/neonate	<6 months
infant	0-4 years
juvenile	5-12 years
subadult	13-18 years
young adult	19-25 years
middle adult	26-45 years
mature adult	45 years +

There may be overlaps between categories or a broad category, such as adult, where insufficient evidence was present. The sex of the individual was ascertained where possible from sexually dimorphic traits on the pelvis and the skull and from metrical data. Where it has been allocated it should be treated with caution as only one or two traits will have been used.

The Cremations

Cremation 1 (F5035)
A complete jar contained a small flagon, which sat on top of the tightly packed cremated bone. A small iron object was recovered from just above the bone. Also inside the jar was a single sherd in a shell-tempered fabric. The deposit of bone was covered with a mid brown sandy silt with rare flecks of charcoal. The degree of firing is variable; whilst some of the fragments are well calcined many, particularly the feet and lower limbs are only scorched. Recognisable elements include skull, vertebrae, ribs, upper and lower limb bones, patellae and foot bones. Enthosopathies were recorded on the posterior of both calcaneuses and patellae. The largest fragment (tibia shaft) measures 126cm.

Cremation 2 (F5119)
A large (truncated) jar contained cremated bone. There were two accessory vessels (one glass and one ceramic). A small quantity of bone was recovered from the surrounding fill but this is likely to have derived from the cremation urn. The majority of the bone fragments were a buff white colour. Identifiable elements include skull fragments, patella, carpals and upper and lower limb shafts. The largest fragment (femur shaft) measures 74mm but most are much smaller. Associated with the burial was burnt sheep bone (from a radius, and 86 other unidentifiable fragments), a sherd and a single hobnail.

Cremation 3 (F5120)
A severely truncated jar contained cremated bone much of which, because of the degree of bone fragmentation, could not be identified. Identifiable fragments include skull, vertebra and lower arm shafts. The largest fragment (ulna shaft) measures 64mm although most are much smaller. There were 15 fragments of animal bone but all unidentifiable.

Cremation 4 (F5121)
A heavily truncated jar contained cremated human bone. A small quantity of unidentifiable burnt bone was recovered from the fill around the pot but this is likely to have derived from the vessel originally. Inside the pot identifiable fragments include skull, humerus and long bone shafts. The largest fragment (long bone shaft) measures 34mm. 24 fragments of sheep-sized animal bone occurred with the human remains, including a femur, vertebra and rib (and 21 unidentifiable fragments), both burnt and unburnt.

Cremation 5 (F5122)
A truncated jar contained very small fragments of calcined bone. One single sherd was also found. The fill surrounding the pot also contains bone fragments, which the excavator interpreted as not deriving from inside the pot. Identifiable fragments include transverse process and long bone shafts. The largest fragment (long bone shaft) measures 35mm. Ten small fragments of unidentifiable, unburnt animal bone were identified.

Cremation 6 (F5305)
A large, truncated jar contained a flagon and cremated bone. A single sherd (burnt and abraded) also occurred. All the human bone fragments are well calcined with the exception of the mid femur shaft. Identifiable fragments include skull, upper and lower limbs including radial head (17mm), pelvis, vertebrae, phalanges, patella. The largest fragment (femur shaft) is 61mm. In addition to the human bone a relatively large quantity of animal bone (sheep-sized and chickens) was identified: fragments from a sheep pelvis, sheep-sized ribs, a chicken femur, tibiotarsus and tarsometatarsus, and a bird shaftbone occurred, along with 107 unidentifiable pieces.

Cremation 7 (F5307)
An unurned burial was associated with two flagons and a jar placed on top of the cremated bone. The jar contained a few fragments of burnt bone and it may be that it had tipped over and spilled its contents. All the human bone fragments were well calcined with the exception of some of the skull fragments. Recognisable fragments include skull, pelvis, upper and lower limbs (femur head 39mm), vertebrae, teeth and phalanges. Although the majority of fragments are adult some immature skull fragments were identified. The largest fragment (skull) is 74mm. Cremated animal bones also occurred, and included a chicken coracoid, a sheep-sized femur and 12 sheep-sized rib fragments, as well as 133 unidentifiable pieces.

Cremation 8 (F5572)
A truncated vessel contained well calcined cremated bone. There were four accessory vessels in the pit, which have been damaged by ploughing and a modern land drain. Identifiable human bone fragments include skull, limb bone shafts, vertebrae. The largest fragment (humerus shaft) is 54mm. An iron nail, lump of molten glass and 2 fragments of cremated, sheep-sized rib sheep bone were also recovered.

A small quantity (20g) of cremated human bone including fragments of skull and limb bone shafts was recovered from F5083 in the evaluation. The osteological observations of the cremations, bone weights and associated finds are summarised in Table 3.11.

The Inhumations

In addition to the cremation burials two inhumations were identified in the burial area.

Burial 1 (F5266)
Well preserved neonate burial found on the surface of the truncated subsoil when hand cleaning the area. The child was lying on its left side, head to the east, left arm flexed, hand below head and both legs flexed. Long bone measurements suggest an age at death of 0-6 months whereas dental development puts the age at birth ± 2 months.

Burial 2 (F2089)
Well preserved neonate lying on its right side, legs flexed, head to the west. The child is possibly slightly older than [499]; long bone measurements suggest 0-6 months, whereas dental development puts the age at 6 months + 3months. The body lay centrally within an oval grave cut, 0.73 x 0.56 x 0.25m

The Faunal Remains (A. Clarke)

Cremated animal bone was recovered along with the human bone in seven of the eight cremations, during hand excavation and wet sieving, though only separated from the human remains during post-excavation. A large deposit of cremated bone also occurred in F5061, possibly redeposited (see Figure 3.6). The majority of the bone was bright white in colour indicating burning at high temperatures. Consequently the bone is highly fragile and was recovered in a very fragmentary condition and any figures quoted for the cremated animal bone should therefore be taken as a minimum. Due to the condition of the bone it was not possible to age or sex any of the bone.

Species representation: - the majority of the cremated animal bone is in a highly fragmented state and is unidentifiable to species. It was only possible to confidently identify two species in the cremation assemblage, sheep and chicken (see Table 3.11). The remaining bone fragments were classified as sheep size or bird species; one cannot rule out the possibility of other species being present, but from their size and conformation it is likely that these fragments originate from sheep and chicken.

Element representation: - The sheep and sheep size bones include the fragmented remains of the femur, radius, pelvis and vertebrae but mainly ribs. The chicken remains are limited to the elements of the back leg (femur, tibiotarsus and tarsotmetatarsus). It is worth noting the indiscriminate preservation that occurs in cremations as evidenced by the preservation of more fragile ribs than any other sheep remains and by the absence of more robust elements such as the phalanges or the petrous (part of the skull) bone. However having said that, it is also possible that these species were not introduced to the cremations as whole animals but as dressed cuts of meat.

The fragmentary nature and small size of the cremation assemblage has hampered its analysis somewhat but those bones that have been identified do seem to fit in with the accepted patterns of animal bone associated with human cremations at this time. During the Romano-British period the most commonly identified animals in cremations are pig, bird species and sheep and there also appears to be a trend to limit any species included to a maximum of two. A pattern that was identified at the recently excavated Eastern Cemetery of Roman London, where pig and chicken were most common, with the remains seen as dressed cuts of meat, rather than whole

animals (McKinley 2000). In terms of the animal bones then, it would seem that the cremations at Vicar's Farm fall into the category of fairly classic Roman cremations. The only two species present are represented by the possible remains of dressed joints of meat, which were either included with the actual human cremation or were the remains of ceremonial feasting thrown into the cremation fire. Whatever the case, it is apparent that in this part of Roman Britain it was sheep and chickens that were the only animals worth being seen dead with.

The Pottery (G. Monteil)

The group of eight cremations were associated with an estimated number of 17 vessels (including accessory and primary vessels; see Figure 3.7). The two infants inhumations did not have any goods associated but a sherd was found in the grave fill with inhumation F2089. The vessels were variously truncated, the worst preserved from cremations 2-5 (F5119, F5120, F5121 & F5122).

Cremation 1 (F5035)

a) Small narrow-mouthed jar/flask (<3755>; 272g, 1.00 eves), showing signs of wear/use. In a local coarse sandy greyware fabric (CSGR) (Figure 3.7: 1).
b) Large, short-necked cordoned jar with a band of lattice decorations below the rim (<120>; 2kg, 0.27 eves). In a local coarse sandy greyware fabric (CSGR). (Figure 3.7: 2).
One sherd in a shell-tempered fabric (SMSW) was also found in the fill of the jar.

Cremation 2 (F5119)

a) Flagon (27g). In a buff-pink fabric (CSRE), reminiscent of Cherry Hinton/Greenhouse Farm type wares (Evans 1991; Gibson & Lucas 2002).
b) Jar (267g). In a local coarse sandy grey fabric (CSGR). Upper part truncated (Figure 3.7: 3)
One sherd in a local sandy greyware with black-burnished surface was also found (CSBB).

Cremation 3 (F5120)

Jar (130g). In a local coarse sandy greyware fabric (CSGR). Upper part truncated (Figure 3.7: 5)

Cremation 4 (F5121)

Jar (179g). In a local sandy grey ware (CSGR). Upper part truncated (Figure 3.7: 6)

Cremation 5 (F5122)
Short-necked Jar (16 sherds, 180g, 0.12 eves). In a coarse local sandy grey ware (CSGR). (Figure 3.7: 7).
One sherd in a local sandy redware (CSRE) was also found (3g).

Cremation 6 (F5305)

a) Everted Jar (1629g, 0.65 eves) In a local sandy grey ware (CSGR). (Figure 3.7: 8)
b) Devolved ring-necked flagon (470g. 0.75 eves), with a chipped rim from use prior to deposition. In a local sandy grey ware (CSGR). (Figure 3.7: 9)
An abraded and burnt sherd from a mortarium was also recovered in this group.

Cremation 7 (F5307)

a) Everted rim jar with burnished acute-lattice (118g, 0.90 eves); in BB2 fabric (Figure 3.8: 1).
b) Devolved ring-necked flagon (331g, 0.75 eves); in a local coarse white fabric (CSWW) (Figure 3.8: 2).
c) Flagon (190g); In a local coarse white fabric (CSWW). Rim truncated. (Figure 3.8: 3).

Cremation 8 (F5572)

a) Beaker (31g). In a local fine grey ware (FSGR).
b) Flagon (52g) in coarse local white ware (CSWW).
c) Devolved ring-necked flagon (232g, 1.00 eves). In coase local white ware (CSWW). (Figure 3.8: 4)
d) Dragendorff 36 dish (231g, 0.70 eves) in Central Gaulish Samian (CGSM) (Figure 3.8: 5)
e) Reeded flanged bowl (607g, 0.90 eves) in a coarse white slipped ware (CSWS). (Figure 3.8: 6)

The Glass (H. Cool)

Cremation 2 (F5119)
Bath flask (Figure 3.7: 4). Blue/green; many bubbles some large. Rim, neck, handle and 12 body fragment, two pairs of body fragments joining. Rim bent out, up, in and flattened, convex-curved side, probably slightly squashed spherical body; loop handle applied to shoulder, trailed partially up neck, bent back down to shoulder with return trail running up handle. Small part of return trail of second handle on neck below rim. Rim diameter 30mm., present height (rim fragment) 32mm, wall thickness 1.5 - 2.5mm. (SFno. 114)

Bath-flasks were in use from the mid to later 1st century to the mid 3rd century (Isings Form 61; Price and Cottam 1998, 188-90). It is not possible to date this example closely within that period. though it may be noted that the form does not become a frequent find until late in the 1st century. They are not as common in graves as other forms of unguent bottle but served the same role, i.e. to hold oil that was used either to anoint the body prior to burial or cremation or, in the latter case, perhaps to pour over the pyre before or after it had been fired. Where they are found intact as in the case of one from a cremation burial at Shoebury (*VCH Essex*, 179), then either function could be possible. In the case of the example from this burial, however, it seems likely that the contents were used at an early stage of the funerary rite. The extreme bubbliness of the glass makes it clear that all of the fragments were from the same vessel, but though a substantial part of it is present, much is missing and few of the fragments join. Clearly the vessel had been broken and only a subset of the fragments chosen for incorporation into the grave. There is no overt evidence of melting as might have been expected if it had been used as a pyre good. One of the fragments, however, does have the sort of sinuously curving jigsaw-like fracture that can result from heat shattering. Similar features were noted on a bath-flask from a mid 3rd century cremation burial at Brougham, Cumbria where there was evidence that pottery vessels were regularly placed to the side of the pyre (Cool forthcoming). It was suggested that the bath-flask there might have been placed in a similar position after the contents had been used. Something similar may have happened here as well.

Discussion (with N. Dodwell)

Of the 8 cremation burials examined, 3 were identified as adult, 4 as subadult/adult and 1 as a dual cremation containing the bones of an adult and a juvenile/subadult. No neonates or infant cremation burials were identified. The remains of immature individuals, particularly neonates are under represented in all archaeological periods in both cremation and inhumation cemeteries and differential burial practices and/or their fragility are usually cited as explanations of their absence. In the later Roman period there is a strong association between neonatal/infant burials and buildings and at Vicar's Farm there are examples of these (see section on inhumations). Although extremely fragile, neonate and infant bone *does* survive the cremation process, both archeologically and in modern crematoria. For example, in the late Iron Age cemetery

at King Harry Lane, Herts. Stirland (1989, 242) recorded 3 neonate cremation burials and at Westhampnett, Sussex Mickinley (1997, 64) identified a 3-6 month old infant. Finding references to cremated neonates in the Romano British period is far more difficult, although in the unpublished findings from St Stephens, Herts. two foetus/neonates were identified amongst the cremation burials (Mckinley 1992). Two neonate skeletons F5266 and F2089 were found within the group of cremations. Given their proximity to the cremations (all lie within an area c. $4m^2$), and without dating evidence, the assumption has been made that they are contemporary with the cremation burials. Philpott (1991, 101) noted that both Pliny and Juvenal testify to the practice in Italian cities of inhuming rather than cremating infants 'before the age of teething' and it would seem that differential burial practice rather than truncation or fragility is the more likely explanation for the absence of cremated neonates/infants at Vicar's Farm.

Two burials were tentatively sexed as female and one of these, F5307 has been identified as a dual cremation; immature skull fragments were found commingled with the adult remains and it is possible that many of the unidentifiable bone fragments derive from the younger individual. Burials comprising dual cremations most commonly include an adult and an immature individual.

The weight of human bone recovered from each burial ranges from 23g to 1543g. Observations at modern crematoria (McKinley 1993) have shown that the weight range of collectable (.>2mm) cremated bone expected from an adult cremation is *c.* 1000-2400g, with an average of *c.* 1650g. Only two burials (F5035 and F5307) have bone weighing over 1000g but the low bone weights of the other burials is probably the result of severe disturbance/truncation (see table 3.12). It should also be noted that burial F5035 with 1543g of bone is unique on the site in that the urn is complete and all the bones that were originally interred could be analysed. Also F5307 contains the remains of two individuals; several immature skull fragments were recorded mixed with the adult bone.

Bone fragment size is dependent on several factors; the cremation process itself, collection from the pyre, excavation and post excavation treatment (Mckinley, 1994a). The bones from F5035 were considerably larger and the skeletal elements more complete than those in the other burials but this is probably because the urn has protected them. Also many of the elements are only charred and so less fragile. The fragment size of the bone from the burials at Vicar's Farm is within the normal range observed (ibid) and there is nothing to suggest any deliberate fragmentation.

Only very occasional fragments of wood charcoal were recovered from the burials and there was a notable absence of what Mckinley describes as redeposited pyre debris in the grave fills (2000a: 41-2). Whilst the absence of pyre material within the burials could be the result of the severe truncation, it is as likely to be genuine and reflect the burial ritual. The magnetic anomaly and pits F5696/F5697 may be a more likely location for the pyre site which is some distance from the burial pits (*c.* 15m). Philpott has suggested that 'the great majority of cremations were carried out on pyres away from the final burial site' (1991, 8) and the absence, if genuine, of any pyre debris in the graves may support this.

The efficiency of cremation is reflected primarily in the colour of the bone (Shipman et al 1984) with fully oxidized bone being a buff-white colour. With the exception of F5035 the majority of human bone from the burials appears well cremated. In burial F5035 the skeletal elements from the lower body, particularly the left side, are a mid brown/grey colour indicative of very poor firing. The posterior of the right proximal tibia shaft and inferior and lateral aspects of the left calcaneus are almost unburnt with only small patches of black suggesting very little direct contact with the fire. Incomplete combustion is also demonstrated by the presence of a thin black, glassy residue, on the articulating facets of the left calcaneus and talus, probably poorly fired cartilage. A large minority of black, blue and grey bone fragments are fairly frequently noted in Romano-British cremation burials (McKinley 2000b) and may be the result of problems with time, temperature or oxygen supply of the pyre or even a perception of what was considered 'complete cremation' (Mckinley, 1994).

Pyre goods, that is those items worn on the body, placed beside the body on the pyre or thrown onto it, were identified in six of the burials. These were recovered during sieving and should be seen as a minimum number firstly because many artefacts would not survive the cremation process and secondly, not everything would have been collected from the pyre site.

Burials containing cremated animal remains are not unusual in the Romano British period although the percentage of burials on a site varies quite considerably; at Westhampnett (McKinley 1997) only 3.5% of the Roman-British burials contained animal bone and at the east London cemetery (Barber and Bowsher 2000, 75) 50% did. Although the group at Vicar's Farm is small, 5 burials (62.5%) contained some cremated animal bone, which is a relatively high proportion of the burials. The animal bone identified, sheep and chicken, are amongst the commonest animals to be found in Romano British cremations (Philpott 1991, 196). A single hobnail was recovered from burial F5119, a subadult/young adult (cremation burial F2084 in the inhumation cemetery to the south also contained a hobnail). Finds of single hobnails in graves are not uncommon and have been recorded at Harlington (Dawson 2001, 32), in 2 instances at King Harry Lane (Stead and Rigby 1989, 111) and in 3 instances in London's eastern cemetery (Barber and Bruno 2000, 68). A single lump of burnt glass (6g), unidentifiable as a vessel was recovered from grave F5572. Its amorphous shape suggests that the temperature of the pyre reached at least 700°C (McKinley 1994, 84). The nails found in 3 of the graves (and from burial F2084) are likely to have derived from coffins or biers placed on the pyre or possibly from reused timbers used in the pyre.

The Southern Fields (Areas B/C/D)

The areas defined as B, C and D do not properly exist at this date, although a ditch system is cut which traverses all the land later occupied by them (see Figure 3.1).

Southern sub-enclosure

A small square enclosure (G1) lies on the southern end of the main settlement enclosure by the entrance. Defined by ditches F5509 (1.4m wide and 0.5m deep), F5495 (0.75m wide, 0.15m deep) and F5115 (1.2m wide, c. 0.45m), with the western return either ploughed out or truncated/masked by the later F5431 of G19. Running

across the opening of this enclosure but offset is ditch F5434 (0.95m wide, 0.16m), which would seem to deflect or control access in and out to either side. On the southwest edge of this enclosure lay well F5595 (2.6m diameter, 1.05m deep); a number of wells or cut waterholes lie in this area, three in total, the earliest being F5595 and an adjacent one (unexcavated) and finally F5474 (3.4m diameter, 1.85m deep, dated AD140-240).

This small enclosure (G1) with the wells/waterholes is probably related to stock management of some nature, and is linked to a larger, more open ditch system (G3). Ditch F5385 (variously 0.4-1.8m wide, 0.1-0.4m deep) runs off the G1 enclosure and toward its southern end, curves round in a hook, leaving its western side wide open. This is possibly used to herd and direct stock up into the smaller G1 enclosure, and may be more relevant for horses than other stock such as cattle or sheep. Broadly contemporary with this are a series of regular linear ditches which 'square' off this open field. Running along the outer edge of the southern side of the large curving ditch is a slighter gully F5384 (0.5-0.9x 0.3m), and on the western side, gully F5351 (1m wide and 0.15m deep). The eastern side is rather more ambiguous but a number of parallel gullies run north-south, some of which may relate to this system or they may simply be late furrows (F8243 east, 0.45-0.8m wide, 0.1-0.2m deep and F8237/8170/8171 west, 0.5-1.2m wide, 0.1-0.3m deep; also F5594 and F5429, 045m wide, 0.12m deep). At the tip of the curvilinear ditch F5385 is a pit F5388 (0.8x0.2m) and several tree throws. There seems to be some continuity with this system and the pre-settlement enclosure G12 (see Chapter 1) as there is also a well/waterhole in the same location (F5610), and it may be that this is a re-organisation of the same kind of enclosure system.

The Northern Fields (Area E)

Trackways/Roads

Running down from the northeast to the northern entrance of the main settlement enclosure was a wide trackway (G5), defined by parallel ditches *c.* 11m apart (F5176, 1.3-3.8m wide, 0.4-0.8m deep and F5596, 2-3.6m wide, 0.3-0.5m deep) with possible remnants of metalling in the form of gravels (F5616) surviving at the northern edge of site. This would seem to form a major route to and from the site, perhaps linking it to another settlement or site on Madingley Rise. Another trackway may exist on the eastern edge of the site, though the traces are slight. A single shallow ditch (F5676, 0.6m wide and 0.1m deep) meets the terminal of the G5 trackway, and this has been interpreted as one side of another trackway (G8) leading eastward out of the northern entrance of the settlement. There were a lot of silty gravels in this zone, and while they did not have the appearance of a prepared surface, it is not impossible they may have been laid. Projecting the line of this putative trackway would run it directly to the south gate of Roman Cambridge and, since it would be surprising if there were no direct route from this settlement to the town, this seems a fairly likely interpretation. A sample from F5176 produced only low amounts of plant remains, mainly glume-wheat chaff, and suggests this lay on the periphery of processing activities.

Eastern Side of the Trackway

Between the trackway (G5) and main settlement enclosure (G2), a small parcel of ground (*c.* 500 sq. m) is demarcated by a segmented ditch line (G7) (F5609/F5626/F5630, 0.35-0.95m wide and *c.* 0.1m deep). No firmly dated material was associated with this ditch but on stratigraphic and relational grounds, it is early and in form, the ditches are very similar to those inside the enclosure on the west side (G2.03). Waterlogged plant remains came from F5626 indicating cleared land but with scrubby vegetation, but was devoid of any charred remains. Outside this boundary a number of features occurred, which may indicate some occupation north/west of the site. The features consist of gullies and pits (G6) and are undated except by association to this enclosure (Table 3.13 & 3.14). Only one feature produced closely datable ceramics, F5638 (AD80-180).

Chapter 4. Period II (AD 180-270)

In phase II (AD180-270), the site undergoes major expansion to the south, contemporary with the establishment of an, initially unrelated, field system. In the core of the settlement, the aisled building and cremation cemetery go out of use while the eastern side sees the establishment of some new features (Figure 4.1).

The Core Settlement (Area A)

Main Enclosure

The eastern side of main enclosure (G2) was later re-cut/cleaned out by F4821 (1m wide, 0.14m deep, dated AD240-300), and it would seem this boundary was probably maintained until the end of the 3rd century. Running eastward from the southern limit of the enclosure is ditch F5736 (1.2-2.4m wide, 0.2-0.9m deep, dated AD140-270) which links up with the southeastern corner of the main enclosure (F5499, 2.95m wide, 0.3m deep, dated AD190-230). This would seem to form part of a larger field system (G23) coming off the settlement core, which subsequently gets infilled as the settlement expanded. Hanging off this southern boundary are a number of smaller enclosures; gullies F8084 and F8002, later recut by two semi-closed rectangular enclosures F8142 and F5733 (dated AD240+).

Human Remains (N. Dodwell)

A neonate burial F8087 was found on the far east of the site in a pit/posthole, although an ephemeral one. Dating evidence is absent, but by association, it would seem likely to be phase II than phase III, possibly associated with sub-enclosure F5733. In the far west of the site there was another isolated burial, skeleton F5329 [903], this time a young adult male was identified, head to the northeast. Again, dating is absent, and could be seen as belonging to any phase – but with potentially significant consequences as in phase III, it would lie inside the settlement enclosure, but in phases I-II, outside.

Skeleton [903]
Young adult male
The skeleton is cut by a post-medieval posthole (F.5330), which contains some disarticulated material. Moderately preserved but fragmentary skeleton although the middle and lower part of the body were truncated/disturbed by a later post hole, F.5330. The body would seem to be supine and extended with its head to the northeast of the grave. No real grave cut was identifiable. Lines of enamel hypoplasia were recorded in the mandibular canines indicating an episode of childhood stress between the ages of 3 and 6 years. A large caries on the distal aspect of the left 2nd maxillary premolar and slight deposits of calculus were recorded on the buccal surfaces of the anterior dentition.

c. 18 metres to the north (within the main core settlement ditch and just east of the roundhouse), the anterior portion of a right adult mandible was recovered from the upper fill of a Post Medieval ditch (F5058) during the evaluation stage (Tr.7). This

could have come from another inhumation in the close vicinity and been re-deposited in the ditch through ploughing.

The Interior

The internal organisation of the main enclosure undergoes some major re-structuring in this phase with more formal demarcations, most particularly a major division between the western and eastern sides as marked by ditches F5583 and F5579. On the western side, the whole area appears devoid of features with all activity focused in the eastern side. Within the eastern side, there is a main division marked by the course of a pathway (G2.07) running diagonally through the centre of the eastern half from the northern entrance. This is defined by ditches F788 (2m wide, 0.65m deep, dated AD140-300) and F5309 (1.3m wide, 0.5m deep, dated AD 240/270-300).

West of Pathway

The re-organization of the internal space involved a much more regular, rectilinear system of internal ditches (G2.10). In the mid-late 3rd century, the area around the aisled building and shrine are demarcated; flanking the western side of the aisled building is ditch F5579 (c. 1.4m wide, 0.34 deep dated AD140-240/270), while to the north ditch F5583 (1.1m wide, 0.35m deep, dated AD140-240) links up with the new square enclosure around the shrine (see below). The area between the shrine and the cremation cemetery was demarcated by a multiple re-cut ditch which ran between F5583 and a pathway G2.07 (see below). The primary ditch of this line was F5220 (0.3m wide, 0.2m deep, dated AD140-200/240), and recut by F5227 (0.52m wide, 0.19m deep, AD220+). Similar ditches were cut on the eastern side: F5204 (1m wide, 0.4m deep, dated AD240-300) and F5295 (1.45m wide, 0.3m deep, dated AD270+).

Human Remains (N. Dodwell)

Fragments of parietal bone, which from their size and sharp sutures probably derive from a subadult skull were recovered from F5204 [531]. The proximity of this to the cremation cemetery may or may not be coincidental.

East of Pathway

Running up from the southern access was a linear metalled surface (G2.08), marked by heavy cobbling at the entrance itself (F5556) and patches of finer gravels inside (F4538, F4714, F4354 and F5706). It would seem to mark the line of a major through-route within the settlement up to the curvilinear enclosures which occupy the central east side of the settlement core (G2.11, see below). The closest dated ceramics from within the cobbling F5556 date to *c.* AD 200-280, while those from the finer gravel metalling dated to *c.* AD170-240, suggesting these surfaces were established at the very end of the 2nd or early 3rd century, i.e. some time after the establishment of the settlement and were perhaps in response to worsening ground conditions, as also reflected in the ditch sumps cut along the eastern edge of the enclosure. A coin (SF297) was found on the surface of gravels F4354, dated to the third quarter of the 3rd century along with ceramics broadly dated to the late 2nd/early 3rd century. Pit F4730 (3.1m diameter, 0.4m deep) adjacent to F5556 appears contemporary and was

associated with pottery dated to AD 140/180-240. This is one of several pits (G2.20) cut on the outer edge of the southern main enclosure ditch – others include F1929 (0.8m diameter, 0.9m deep), F1931 (1.1m diameter, 0.7m deep) and F5542 (1.1m diameter, 1.6m deep). Spot samples were taken from these last three pits for phosphate testing, to see if an on site interpretation of cess pits held (Table 4.1). These are all similar and although within a high band (100-149 mg. P per 100g. soil), are not particularly high in terms of the site background (see Middleton, chapter 6).

The Pottery (G. Monteil)

The ceramics from the metalled and cobbled surface (G2.08) yielded the highest percentage of imported finewares in terms of sherds count (14.29% of total imported finewares sherds). All of the imported material is samian. One sherd has a possible Martres de Veyre origin. Of the Central Gaulish examples, three forms of Dragendorff 37 were identified, one cup of Dragendorff 33, one mortarium of Dragendorff 45, one dish of Dragendorff 31 and a probably residual early dish of Dragendorff 18 with an illegible and incomplete stamp (Bet and Delor 2000, 470, see n.58A for the form that is always stamped). The last samian material from the group is of East Gaulish origin with three dishes of Dragendorff 31 identified. Otherwise, the assemblage composition is fairly typical of the site as a whole (Table 4.2).

The Aisled Building

As discussed in Chapter 3, the aisled building probably continued in use in phase II, either shortened or as the same size. The main alteration seems to be the cutting of a well on its northwestern side, F5280. It is about 2.6m in diameter and 1.3m deep and dated ceramics from the fills of the well provide a sequence which spans the 3rd century (Table 4.3, Figure 4.2).

Faunal Remains (A. Clarke)

Only a very small amount of bone was recovered (14 fragments) most of which was unidentifiable (57%). The remainder of the bone was identified to cow, horse and sheep and consisted of very fragmentary remains of those bones indicative of refuse from primary butchery, i.e. skull fragments, loose teeth and distal limb bones.

Plant Remains (R. Ballantyne)

Two samples from well F.5280 – basal fill [719] and mid fill [717] – are quite different. The basal fill contains a moderate number of charred remains (5.33 items per litre soil) which reflect the chaff-rich processing debris present in many samples from Area A. In contrast the mid fill is extremely rich (237.67 items per litre), and is probably dumped 'refuse'. Small artefactual remains in [717] include both burnt rodent bones and eggshell, and suggest that material had been scraped up at the location of charring and placed into the well. The charred material is mainly of wild seeds, with some glume wheat chaff and few grains. No other context at the site has such a composition; this appears to be an exceptional charred assemblage, perhaps representing sieve cleanings after threshing and winnowing of cereals (all chaff-

dominated samples are low in wild seeds, which appear to have been cleaned out earlier).

The Pottery (G. Monteil)

264 sherds (6.8kg) of pottery came from the well F5280, and is generally a typical domestic group, dominated by local greyware jars (Table 4.4). Finewares include Nene Valley, Colchester colour-coat and central Gaulish samian (Dr.45 mortarium and Dr31 bowl).

The Timber Shrine

At the start of phase II, in the late 2nd/early 3rd century, the structure (G2.02) is completely encircled and closed off by ditch F5483 (*c*.1.6m wide and 0.7m deep) which warps around the formerly open, southern side (see Figure 3.4). Ceramics from its upper fill, where this has been distinguished, date to the mid 3rd century (*c*. AD240-270). At the same time, the structure may have been dismantled or pulled down; none of the postholes appeared to have *in situ* postpipes, except one of them (F5517), in which ceramics post-dating *c*. AD270 were retrieved. In addition, a large irregular shaped pit F5519 (c. 6.3 diameter and 4.3m deep) was cut on the northern side of the shrine. Its purpose is not obvious, but it may be a quarry pit to provide soil to form a small mound over the dismantled shrine. The backfill of this feature contained mid 3rd century ceramics (*c*. AD240-270) suggesting it was cut at the end of this phase, perhaps around the same time as a larger, square ditch enclosure (F5506 and F5218) was cut around the shrine. This square ditch is 1.6m wide and 0.5-0.8m deep with later 3rd century ceramics in its fills (*c*. AD240-300). Gully F5483 was also recut at this time (F5533), ceramics in its fill post-dating *c*. AD270. As discussed in chapter 3 (see Ballantyne), the recut F5533 was very rich in charred plant remains.

Faunal Remains (A. Clarke)

It is only upon reaching phase II that the shrine and its enclosure produce any discernible patterns in the faunal assemblage worthy of investigation. As can be seen from Table 4.5 a great deal more faunal material was recovered for this period. Although 55% of the bone was unidentifiable to species, it was possible to identify the remainder, mainly to horse and cow. The horse bones are especially dominant but this is largely because they originate from two articulated portions of the skeleton, both of which were revealed in the terminus of the ditch ([519]). The two articulated portions took the form of a left foreleg from the scapula to the carpal bones and an articulated portion of the axial skeleton from the 9th thoracic vertebrae (including some of the ribs) to the sacrum. The deposition of these articulated bones is very significant if one considers three key points. Firstly, both hold prime cuts of meat, secondly, they are still articulated and lastly they have been separated from the rest of the carcass. This same enclosure ditch also contained a number of other animal bones: several other horse bones were found, including a fragmented skull along with a small number of sheep and cow bones, notably two mandibles.

Forecourt

As in phase I, the forecourt area remains a largely open space with a few pits, two of which have been assigned to phase II on the basis of associated pottery, F5242 (0.75m diameter, 0.37m deep, dated AD200-300) and F5246 (2.2m diameter, 0.2m deep, dated AD140-240).

Structure A

Not as formal or well constructed as the aisled hall, Structure A (G2.06) seems to have been built with a beam slot for its northern wall foundation and postholes along the south, toward the end of phase II, and probably continued in use in phase III (Figure 4.3, Table 4.6). Around 8.5m long and 5.3m wide, it also seems to have had a c. 3m extension or adjunct on its eastern end, set off the alignment of the main structure. This had a line of posts on its east side, but more curiously, appears to have had a sunken floor or a sunken level beneath the floor. This sunken level, F5688 (dated AD 120-200, 240+), was 0.8m across and *c.* 0.2m deep and had linear furrows along its base reminiscent of spaded beds; it is possible it represents a small horticultural plot (e.g. for vegetables, pulses or herbs), and indeed this perhaps makes more sense than a sunken-floored feature. Associated with this adjunct were gullies F4450 (0.5m wide, 0.26m deep, dated AD240+) along the north side and F5690 (0.55m wide, 0.25-0.43m deep) on the west side, both of which run up to the path (G2.07) creating a triangular space within which this adjunct sits.

Curvilinear Enclosure

Situated in the centre of the main settlement was a double curvilinear enclosure (G2.11) open to the north, defined by an eastern enclosure ditch F5678 (0.7-1.5m wide, 0.25-0.4m deep) and F5717 (0.6m wide, 0.12m deep) and a western one F4660, later recut as F5710/5711 (*c.* 1m wide, *c.* 0.25m deep; Figure 4.4). Ditches F5678 and F5717 both contained ceramics dating after the mid 3rd century as well as some earlier residual material. It is probable that the enclosure was cut in the later 3rd century, at the same time as the shrine was enclosed; indeed there is almost a symmetry between the two enclosures and their position in the settlement, flanking either side of the pathway (G2.07) which bisects the settlement core diagonally. There is also a symmetry with G17 enclosure to the north (see below), particularly in terms of form and orientation, and with which it is contemporary in a later phase.

A thin scatter of pits (G2.09) lay along the eastern boundary of the enclosure: F4886, F5709, F4646, F4645, F4644, F4689, F4691 and probably F4639, most of which are probably associated with this enclosure, though they may possibly pre-date it (Table 4.7).

The Faunal Remains (A. Clarke)

Only 9 bone fragments were recovered from these features, a very small quantity, all the identifiable specimens being cow or cow-size.

The Pottery (G. Monteil)

Although jars comprise the main vessels in use, compared to the rest of the assemblage this group produced a high level of beakers and flagons for the period and was noticeably lacking in dishes and bowls (Table 4.8). This group is one of the two assemblages that yielded a flagon with a facemask rim, this example being in a Nene Valley colour-coated fabric. Although shattered in several fragments, the top of the flagon was complete. A similar Nene Valley example was found on Orton Hall Farmstead (Perrin 1996, 150, n.339 fig.94). These vestigial flagons seem to be more common in later Roman contexts (see Monaghan 1997, 926-928 for York where painted and moulded face-neck pots are also been found in late phases).

Monumental Post

South of this enclosure stood a small, sub-square enclosure defined by a gully; in phase III, a large posthole occupied the centre of the enclosure which was re-cut, and it seems likely an earlier version of this post-setting existed in phase II. Certainly the profile of the posthole cut suggests a re-cutting (see Figure 4.5) and many of the finds (pottery and coins) from the posthole date to this phase. The gully encircling the post (F5702/5703) was 0.6m wide and 0.3m deep and was associated with ceramics broadly dated after AD140; this gully was open on its western side. Within the gully enclosure were a number of postholes which may be structural but do not appear to form any identifiable configuration (Table 4.9).

Contemporary with the primary phase of the post-setting, a gully system (G2.13; F5555/5553/5557; 0.7m wide, 0.2m deep) is cut, wrapping around the post-setting and joining up with the larger enclosure to the north. Ceramics from the fill have been dated to within the range of AD140-240. The re-cut ring-ditch F5705 (see Chapter 5) cuts this gully system. Only 3 fragments of bone were recovered from this feature.

Running from the post westward was ditch, F5042 which was *c.* 0.5m wide and 0.15m deep and associated with pottery dated AD45-140 and AD80-180 (G2.15).

Southern Core Extension (Area B)

A number of sub-enclosures are contained within a large, southern extension to the settlement (G24); the basic limits of this extension are defined by ditch F5427 (1.5-4m wide, 0.5-1.2m deep, with pottery dated AD325/340+, and two coins dated to the late 4th c. all from the upper fill), which continues eastward as F5420 and then as F8074 (0.4-1.1m wide, 0.2-0.6m deep) and F8075 (0.61-1.16m wide, 0.2-0.6m deep, dated AD240+). This arrangement of these ditches is quite significant insofar as they define the point of contact between two slightly different alignments, that of the main settlement enclosure to the north, and the ditch system to the south (see Figure 4.1). Within this, there is a major internal division marked by F5431 (4.8m wide, 1.5m deep, dated 270/300+), either side of which has smaller bays or sub-enclosures (G19). Three substantial ditches coming off F5431 to the east create three bays, from north to south: F5524 (1.6-2.7m wide, 0.75-1.3m deep, dated AD240+), F5558 (2.2-3.5m

wide, 0.87-1m deep, dated AD180-280) and F5450 (2.2m wide, 0.58m deep, dated AD240+). On the west side, F1844 (2.2m wide, 0.7m deep) runs up to the G11.01 structure, which also includes ditch F5455 (see below). A number of narrower, unexcavated gullies also belong as part of the western side of this group.

Hanging off the southern, outer edge of this ditch line is a small sub-enclosure (G27) defined by ditches F5422 (1.7m wide, 0.79m deep, with pottery dated AD325+, probably from upper fill) and F5407 (1.2m wide, 0.21m deep), which are probably part of a continuous circuit whose southern side has been truncated by the later F5389 (G18). East of this, F8227 (0.5-1.2m wide, 0.2-0.42m deep) forms the east and south side of another similar enclosure, containing internal east-west gullies F8230 (1.3m wide, 0.37m deep) and F8250 (1.3m wide, 0.3m deep). It abuts to the south, a curving gullies F8226/F5486 (0.4-0.8m wide, 0.24-0.32m deep). Further to the west, also on the outside of this southern boundary ditch, lies a well/waterhole F5442 (1.3m diameter, depth 0.98m dated AD240-300).

Plant Remains (R. Ballantyne)

Two samples were taken from the main ditch F5427 (Table 4.10). The predominance of glume wheat chaff within most of the sampled contexts suggests that a similar source of charred remains (crop-processing waste) is present within both the southern outer zone and the core area.

Structure B

Inside this secondary enclosure was an internal structure (G11.01) defined by a single north-south bedding/beam slot (F5544) on its western side although an eastern line may have been truncated by the later ditch F5427 (Figure 4.6). The structure was divided into two bays marked by slots F5545, F4174 and F5672; the former two are linked by another slot F5633. A number of postholes occur inside and along the outer length of this structure (Table 4.11). The structure does not present a clear building form except it is rectangular, and approximately 11m long by 5m wide. To the south of this structure is a metalled surface F1356 between gully F5458 on the west, (0.9m wide, 0.24m deep, dated AD120-140), and ditch F5455 to the east (0.6-1.1m wide, c. 0.3m deep) which returns eastward at the corner of the structure to run into F5431 of G19.

The Southern Fields (Area D)

At the southern margins of the excavated area, a long boundary ditch ran east to west across the site, stopping just short of the western limit of excavation and defined by ditches F5369 (0.8-2m wide, 0.3m deep) and F5367 (*c.* 1.8m wide and 0.2m deep) (G4; see Figure 4.1). Parallel to this and with a return marking a narrow entrance to an elongated passage into an enclosure, is ditch F5340 (0.8-1.25m wide, 0.27-0.45m deep). This would seem to continue north as F5400 (1.3m wide, 0.3-0.48m deep) and F1094 (0.3m wide, 0.15-0.4m deep), creating a large enclosure (G13). None of these ditches have firm dates, although the southern boundary ditch is later re-cut as F5366 (1.4-2.5m wide, 0.3-0.74m deep, dated AD120-200, but with residual Iron Age

pottery). At the corner of F5340 as it turns north as F5400 lies a cremation F2084 which would seem to act as a focus for the later inhumation cemetery (see Chapter 5).

The Cremation (N. Dodwell)

Cremation F2084, possibly the focus of the later cemetery had been greatly disturbed by a Medieval furrow and was identified in a second machining of the area. The cremated bone was placed in a vessel which was severely truncated and only the base survived in situ. The matrix inside was excavated in the lab and treated in the same way as the burials from the cremation cemetery (see Chapter 3). A total of 210g of cremated bone was recovered and the bones are the partial remains of an adult. The fragments are generally small with the largest fragment (femur shaft) being 57mm. The material is generally a white buff colour indicative of full oxidisation although the femur shaft was a grey blue colour. A single iron nail and a hobnail were identified (Manning 1985, Type 10).

The Pottery (G. Monteil)

The cremated remains were interred in a wide-mouthed jar (1360g, 0.05 eves), in a sandy greyware (CSGR), which has been dated to c. AD180-230 (see Chapter 5, Figure 5.9: 2). Associated with the burial were also fragments from a Nene Valley colour-coated beaker (131g) and a sherd in a fine sandy redware (FSRE).

The Northern Fields (Area E)

Western side of Trackway

In the first half of the 3rd century, the area enclosed between the main trackway and the main settlement is remodelled with the original ditch probably backfilled and a new ditch positioned closer to the corner (G7): F5015 (2.5m wide, 0.6m deep, dated AD200-240) with another ditch coming off it F5624 (2m wide, 0.65m deep). In the later 3rd century, a final ditch is added, F4137 (0.7-1.3m wide, 0.34-0.6m deep, dated AD240+). The enclosed area contained two pits; F8025 lay on the northern side (c. 2.3 x 1.2m wide) and was associated with pottery dated after AD180, while F5017 on the southern side contained some undiagnostic Roman pottery and disarticulated human remains; this pit was disturbed by a Post-Medieval ditch, and other human bone was found (presumably re-deposited) in the colluvium just to the north of this pit, (see human remains below). It is ambiguous as to whether there was originally an articulated inhumation here or a pit with disarticulated bone.

To the north, ditch F5014 (G6) (0.7m wide, 0.1m deep, dated AD120-200) runs up to and cuts the western trackway ditch forming a new northernmost visible boundary to the settlement.

Human Remains (N. Dodwell)

A large quantity of disarticulated material was recovered from pit F5017 during the evaluation in Trench 10. They are all adult sized and include limb shafts, skull

fragments and hands/toes. A further fragment of skull and a single worn tooth (1st mandibular premolar) were recovered from [271], the Post-Medieval colluvium above the ditch fill.

Plant Remains (R. Ballantyne)

Low amounts of charred plant remains occurred in ditches F.5015 and F.5624. The samples contained mainly glume-wheat chaff, and appear to be poorer representations of the charred crop-processing debris present within the core area. The northern area of the site has been damp in the past through to the present. Good waterlogged plant remains from ditch F.5624 indicate that the area had been cleared, but that scrubby vegetation was present. Ditch F.5624 also contained aquatic plant taxa, including fool's water-cress (*Apium nodiflorum*), and watercress (*Rorippa nasturtium-aquaticum*), and appears to have been particularly wet.

Eastern Side of Trackway

In the northeast corner of the site, a small rectangular enclosure is cut with narrow strip subdivisions (G16). Defined by main ditches F5588 (1.9m wide, 0.28-0.6m deep, dated AD240+) and F5564 (1-1.4m wide, 0.2-0.6m deep, dated AD140-240) the area within these ditches was further sub-divided into narrow strips of land by gullies F5598 (0.35m wide, 0.17m deep), F5577 (0.8m wide, 0.14m deep), F5608 (0.4m wide, 0.28m deep) and F5567 (0.7-1m wide, 0.15-0.17m deep). Within one of these (wider) strips, was a small structure (E), defined only by a right-angled gully F3066 (0.65m wide, 0.22m deep, dated AD350+ from pottery in its backfill) enclosing a square area 4m by 4m. Associated with this gully were three shallow pits F5573 (0.8m wide, 0.2m deep), F3064 (0.4m wide, 0.05m deep) and F3068 (1m wide, 0.2m deep). Ditch F5566 (G15) to the south was probably also cut in this period, but pre-dates the G16 enclosure though was probably still open at the same time.

Chapter 5. Period III (AD270-410)

In the final phase of the Roman settlement (AD270-410+), the site transforms radically as a third area is added to the south, linking up the main settlement with the southern field system, which now has an inhumation cemetery on its boundary. In the core of the site, the features in the eastern half develop to form a new centre of activity, while the eastern boundary of the site is backfilled and the whole core opened up to the east, beyond the limit of excavation (Figure 5.1).

The Core Settlement (Area A)

Main Enclosure

The northern boundary of the main enclosure (G2) was re-cut in the 4th century as F5681 (1.1-1.3m wide, 0.3-0.5m deep, dated AD 300+); possibly this is the same ditch as F5092 returning (see G14, Area B). It is probably also associated with F5559 (1-1.4m wide, 0.5-0.58m deep) which runs eastward, blocking off the G5 and G8 trackways into the site.

The Interior

Unlike the previous phase, where there was a clear bi-partite division between an eastern and western side within the main enclosure, now there is a much more concentric arrangement with multiple sub-enclosures set around a core area, occupied by the curvilinear enclosure (G2.11). The internal pathway (G2.07) is maintained, and in the early 4th century is even metalled with fine gravels: F5536 (1.2m wide, dated AD300+) Its southern edge is marked by ditch F5661 (0.65m wide, 0.27m deep, AD270+). In the late 4th century, a substantial ditch was cut F5304 (1.9-2.1m wide, 0.87-0.96m deep, dated to AD350+). Nevertheless, many of the old internal divisions were maintained. Those on the western side of the main enclosure were re-cut (G2.10); the southern ditch line was re-cut by F5224 (0.5-0.8m wide, 0.4m deep, dated AD270+), the eastern side by F5061 (1.6-1.85m wide, 0.65-0.85m deep, dated AD300+), while on the western side, F5480/F5582 (0.5-2.2m wide, 0.35-0.45m deep, dated AD240-300/330-350) re-cut the line established by F5583. The northern and eastern sides of the square ditch enclosing the shrine were enlarged by F5501 (3-4.8m wide, 0.9-1.2m deep, dated AD 300+), which continued both south and west. Southward, it linked up with the Area B sub-enclosure to the south (G11) and westward it either carries on to the back edge of the main enclosure, or stops at ditch F8264 (*c.* 1.5m wide). In the latter part of this period, ditch F5006 (1.1-2m wide, 0.25-0.85m deep, dated AD340+) which conjoins this latter, bounds the southern edge of the shrine and swerves south, around the well F5280 (but by now defunct) to form a narrow causeway with F5214 (1.5m wide, 0.6m deep, dated AD 300+) which runs into the former southern limit of the settlement core.

Plant Remains (R. Ballantyne)

Three contexts were sampled from the western division ditches: F5501 (twice), and F5480 (Table 5.1). The sample from F5480 was waterlogged, and plant macro-remains show the land was once damp and scrubby. There is also good evidence for nitrogen-enrichment of the soil, either from human or animal waste[1]. The context contains some water-associated plant taxa, suggesting that these features were at least seasonally wet. F5480 was however low in cereal grains, specially compared to F5501 which had very rich charred inclusions, suggesting that it was either much closer to the charring source, or contained dumped refuse.

Forecourt

A number of pits occupy the space (G2.16) between the end of the pathway and the shrine (Table 5.2), from two of which came human remains, one probably a disturbed neonate burial.

Human Remains (N. Dodwell)

Fragments of skull (adult parietal) were found in [491], the upper fill of pit F5263. More substantially, a neonate's whole lower left arm was recovered from the upper fill of pit [703], F710. The bones were not recognised as human on site and so it is uncertain, although likely that they were in articulation. It may even have been part of a complete neonate burial, most of which had been ploughed out.

Curvilinear Enclosure

Toward the end of the 3rd/early 4th century, the curvilinear enclosure (G2.11) is re-cut and made much more substantial by ditch F5652/8167, which varied from 0.9-3.2m wide and 0.3-0.7m deep, and F8263 (c. 2m wide; see chapter 4, Figure 4.4). Possibly contemporary is F4902, echoing the doubling of the primary enclosure, and ditch F5731. This enclosure remains in use until the mid 4th century when it is replaced by a third similar and slightly larger enclosure, sited more to the east, defined by ditches F5722/5704 (size 1.65m wide), continuing as F4802 (1.8m wide), with a series of bays demarcated by F4912 (1m wide), F4863 (1.5m wide).

The Faunal Remains (A. Clarke)

Unlike phase II, a much larger assemblage of animal bones came from the later enclosure ditches (299 fragments; Table 5.3). Cow and cow-sized bones dominate (88%), but much of the remains comes from two articulated deposits – the right hindleg from F5652 and a skull with cervical vertebrae from F5704.

[1] Discussed in detail within 'local environment' section.

The Plant Remains (R. Ballantyne)

The four sampled contexts revealed marked differences in composition (Table 5.4). All contained charred remains dominated by glume wheat chaff, but vary in their density. The very rich contexts of F5652 and F5741 may have been located nearer processing activities, or had waste placed specifically in them. The damp remains in F5741 include low amounts of wood fragments and elder seeds, but differential preservation appears to have caused the loss of most material. The better, waterlogged, remains within F5704 indicate an open area of rough grassland. Eggs of water flea (*Daphne* sp.) and the aquatic celery-leaved buttercup (*Ranuculus scleratus*) suggest that standing water was present in the ditch at least seasonally.

Pottery (G. Monteil)

380 sherds (6.2kg) of pottery was recovered from the late phase of the curvilinear enclosure (Table 5.5). The main significance to this group is the high number of service vessels compared with the general background pattern from the site, especially the high numbers of flagons. Of those vessels which have been unambiguously ascribed a function, by far and away the majority are associated with serving/table wares rather than food preparation or storage (Table 5.6). Otherwise, the main fabric groups as seen on late Roman sites for the region are represented, including Nene Valley, Hadham and Oxfordshire as well as local greywares and south midland shelly wares.

Monumental Post

A large, single post-setting F5707 (G2.12), enclosed by a small ring ditch *c.* 5.6m in diameter re-establishes an earlier version of this feature (see Chapter 4, Figure 4.5). The post-setting comprised a large cut [4672] (0.55m diameter, 0.42m deep) with pottery in the backfill [4670] dated to AD140-180 and six coins, including three minims and another late coin (<5229>, the minims all minted in the third quarter of the 3rd century), and two others (<5219>, dated AD341-6 and 337-41). Many of these finds might be re-deposited from an earlier posthole of which this is a re-cut. The post, surrounded by stone packing, may have been pulled out at some point or simply rotted in situ; ceramics in the postpipe [4668/9] dated to AD240-350 along with a six coins – two radiates and four minims, (<5227>/<5228>, all minted in the third quarter of the 3rd century). These may have moved into the void from the post-pit fill as the post decayed. From the post-pipe, the diameter of the post was 0.5m thick, and set in 0.4m deep (perhaps 0.5-0.6m below the original ground surface), suggesting the post may have stood *c.* 2- 2.5m high. The ring ditch encircling the post (F5705) was 0.6m wide, 0.4m deep, and associated pottery dated post AD270/300). A cobbled surface F4445/F5670 (G2.08) leads off the main metalled surface to the encircled timber post and had ceramics dated AD 270-350 associated with it. It is therefore probably associated with the later re-cutting of the ring-ditch in late 3rd century.

Plant Remains (R. Ballantyne)

Very little charred material is present within F5707 [4668], the few glume bases probably derive from the abundant crop-processing debris identified in parts of the

core area. Waterlogged plant remains suggest open rough grassland surrounding the feature, with occasional standing water in the feature itself.

Structure C

To the west, a setting of posts lie in a relatively empty zone (G2.15); F4627 (0.8m diameter, 0.4m deep, AD270+) and F5306 (0.9m diameter, 0.6m deep, AD140-200), were large postholes fronting a small single cell structure *c.* 2.6m square and marked by a trapezoidal arc of smaller posts to the west (Figure 5.2, Table 5.7).

Pitting Zone

A group of dense inter-cutting pits (G2.17) which lie in a zone between the cremation cemetery and the shrine seem to have been cut and subsequently backfilled with midden material or dark earth (Tables 5.8 and 5.9). F5289 (0.65m wide, 0.28m deep, dated AD300+) may represent an internal division in quarry zone on its eastern side. The form of the pits and method of digging is very typical of quarry pitting seen at other Roman sites in the region (e.g. New Hall, Whittlesey), and it would seem this is the most likely explanation for their cutting. Certainly the edges of the pits show no signs of any modification such as scorching or lining to indicate their use for anything. Nevertheless, the soil through which the pits were cut is a dirty, silty sand and would not seem particularly useful as a raw material for anything – cleaner, purer sands and gravels lie to the north, and better clays to the south. Moreover, the pits are small scale, and not representative of any major extraction process. Assuming that the location is important, yet does not seem to be sensitive to the nature of the subsoil or natural, a chief possibility is that these pits were quarried to provide the soil for a mound covering the cremation cemetery.

Evidence suggests the cemetery was mounded (see Chapter 3), yet there was no ring ditch around them to provide material for a mound. Material from the boundary ditches would have been used to make banks and so to create any substantial mound over the cremations, these pits are the obvious – and only – source of nearby soil. Moreover these quarry pits clearly respect and stop short of the cremations. The pit group does seem to divide into two halves, one east of the dividing G2.10 boundary and one west, and the one to the east was noticeably different in being backfilled with dark earths compared with those to the west. It is possible the two groups belong to two very different phases – the western group to the end of phase I/early phase II, and the eastern group, perhaps in phase III to re-establish the mound. While most of the eastern group pf pits produced late pottery (4th century), none of the pits from the western side produced any closely dateable ceramics. From one of these pits however (F5644, <3263>), came a very fragmented (76 sherds/621g) shell-tempered jar (SMSW) and deposit of an articulated left foreleg of cow, which might hint at some ritual association with the pitting.

Plant Remains (R. Ballantyne)

Pit back-fill [558] in F.5200 is rich in charred remains (62.80 items per litre) and is dominated by glume wheat chaff. The back-fill represents the crop-processing debris present in many contexts within Area A.

Metalled surfaces along northern zone

Metalled surfaces were laid down in the early-mid 4th century along the northern strip of the site (G2.18). Gravel surface F5471 (dated AD240-300/300+, with a 4th century coin on its surface (SF 302)) lay between ditches F5480 (2.2m wide, 0.45m deep) and F5013 (1.1-1.4m wide, 0.38-0.65m deep). Another metalled surface lay further east (G32); F4767/F4857 was bounded between ditches F4760, F4784 (1.9m wide) and F4934 (dated AD240+) to the north and ditch F5741 of G2.11 to the south.

Southern Core Extension (Area B)

Central Area

Within the central area of Area B, the series of eastern embayments (G19) are re-cut: F5524 is recut by F5666/F5520 (1.1m wide, 0.55-0.7m deep, dated AD270+), F5558 by F5532 (1m wide, 0.35m deep), while the southern bay is re-partitioned by F5452 (2.84m wide, 0.4m deep, dated 270+). On the inside of the northernmost embayment was a pit (F5656, 1.5m wide, 0.8m deep) which had a deposit of chicken parts and pig forelegs (see Clarke below). On the western side, the metalled surface associated with and south of the G11.01 structure is maintained as gullies on its northern and eastern sides are re-cut: F5456/F5461 to the north (0.75m wide, 0.03m deep, dated AD340+), and F5449 on the east (*c.* 0.4m wide). The structure itself would appear to have been abandoned as a large sub-enclosure is cut (see G11 below).

Faunal Remains (A. Clarke)

Pit F5656 contained an unusual deposit of animal bone. The assemblage recovered from this feature is entirely limited to the remains of two pig forelegs and the partial remains of at least two chickens. The chicken bones have previously been viewed as meal waste, but with the ritual aspect of the square enclosure in mind it may be possible that these chicken and pig bones are a special deposit that extends beyond the confines of cremations rites.

Square Enclosure with Pits

Abutting these embayments on the east side, a large square enclosure (G28) is added, distinctive in terms of the 'emptiness' of its interior, save three pits (Figure 5.3). The enclosure ditch was slight (F5445; 0.2-0.75m wide, 0.1-0.3m deep) but had a dark fill, though with few finds. None of the ceramics are particularly useful to date the enclosure except to say it is late, but stratigraphically, it would seem to belong to the

later 4th century and the final phase of the site. But there were interesting animal deposits in terminal of the enclosure as it meets the main east-west boundary ditch, and in the pits (see Clarke below). The pits were, in contrast, very unusual in terms of the deposits they contained. In particular, the paired pits F5435 and F5441 showed some curious contrasts. Pit F5435 (0.9m diameter, 0.38m deep, dated AD270+) produced a large assemblage of animal bone, and while most was unidentifiable, there were 28 cow and cow-sized bones, mostly from fore- and hindlegs with the foot bones in possible articulation. There was only one charred grain from this pit, in contrast to pit F5441 (0.95m diameter, 0.48m deep, dated AD140+) which contained a rich assemblage of charred remains (see Ballantyne below), yet conversely F5441 contained no animal bones. Pottery from F5435 was generally in larger fragments than in F5441 and includes sherds from two jars, a bowl, mortarium and a storage jar The third pit F5453 (1.4m diameter, 1.75m deep, dated AD140-270) contained fewer animal bone and few charred remains and no pottery.

A phosphate survey was conducted over the interior of this enclosure on a 5m grid (Figure 5.4; Middleton 2001). The results showed a remarkably clean area, with low phosphate levels in comparison to site background levels, particularly for this part of the site.

The Faunal Remains (A. Clarke)

Two of the three pits within the enclosure produced animal bone (a total of 188, mostly from F. 5435) the vast majority of which (90%) were unidentifiable to species. From F5435, the identifiable bones were dominated by cow and cow-size (28), horse (1) and pig (1). From F5453 came a smaller assemblage of cow/cow-sized (2), ovicaprine (2) and chicken (1). Feature F.5452 (which makes up part of the square enclosure) produced the most interesting group and contained the partially articulated remains of a horse carcass. The animal had clearly been butchered up into separate, major meat bearing portions; a complete, articulated left hind leg was found in association with an articulated axial skeleton from the 2nd thoracic vertebrae (including many of the ribs) to the pelvis. As it was still articulated, the flesh must have still been on the bones when it was placed in the ditch. This animal was butchered but not eaten. This deposit mirrors a similar one associated with the timber shrine, with two more prime meat-bearing sections of a horse carcass selected for deposition rather than consumption. It is possible that there was every intention of eating the horse-meat but it had gone bad and so was disposed of. However, the similarity of this deposit to that recovered from the shrine (see above) suggests other reasons. Also amongst the other bones present were 20 cow/cow-sized bones (including two cow mandibles) and 10 ovicaprine bones.

Plant Remains (R. Ballantyne)

The pits examined here show a range of compositions (Table 5.10). Whilst pit F.5441 included many charred remains, pit F.5453 had few, and pit F.5435 included only one charred grain. The pit contexts again represent a variety of infilling patterns, and thus either uses or settings within the site.

Western Sub-enclosure

To the west of the major dividing ditch F5431, the space is rather differently organised; a large sub-enclosure occupies the northeastern corner (G11). The sub-enclosure is defined by ditches F5428 (0.4m wide, 0.23m deep, dated AD270/300+) and 5417 (2.5m wide, 0.55-0.6m deep, dated AD270/300+), the latter probably continuing north as F5007 (1.1m wide, 0.6m deep, dated AD300+). The continuation of this ditch implies that the former southern boundary to the settlement had been backfilled by this time. There may also be some intentional symmetry between F5007 and its contemporary, F5061 to the north (G2.10), which together create an internal boundary in the core of the settlement, their inward/westward tilt accentuating the threshold between the eastern and western halves of the settlement core. Within this enclosure lies a small, square structure.

Structure D

A small square structure 3.5m by 4m sat within the above enclosure, positioned centrally to its opening to the north (Figure 5.5). Its front faced north and was marked by two large square posts F5600 (1.2m wide, 0.85m deep) and F5552 (1.2m wide, 0.75m deep, dated AD240+). The posts had been set in re-deposited natural clay, in sub-square post-pits which were excessively large for the size of the posts which were only *c.* 0.3m in diameter from the post-cavities. The posts had been removed at some time and the post-cavities backfilled with a burnt matrix including abundant fired clay fragments. A sample taken from F5552 produced a unique deposit of charred grain (see Ballantyne below). A coin (SF 417) minted A.D. 320-24, was found at the base of F5552 and near the top of F5600 was a neonate burial. The rest of the structure was defined by a series of smaller postholes: F4095 (0.5m diameter, 0.2m deep), F4094 (0.3m diameter), F4093 (0.5m diameter), F4091 (0.4m diameter, 0.4m deep), F4171 (0.6m diameter), F4343 (0.55m diameter, 0.23m deep), F4169 (0.5m diameter, 0.25m deep).

Human Remains (N. Dodwell)

Neonate F2091 was found in the post packing of a large posthole, lying on its back, close against the cut edge.

Plant Remains (R. Ballantyne)

Postpipe F5552 was unique in having the only grain-rich charred remains from the site (158 grains/42 chaff per 1.25l). There is little chaff, and no seeds, which suggests that a cleaned crop-product is represented. The context may represent grain that was charred during food preparation. Eggshell was also present in the sample.

Eastern Side

At the eastern end of the site, there is a further partition marked by ditch F5467 (0.9m wide, 0.4m deep, dated AD270+), later re-cut as F5443 (0.9-1.2m wide, 0.2-0.3m deep, dated AD325-350). This demarcates a large area (G10) bounded to the north by

F5731 (G23), which runs up to the curvilinear enclosure F5652 (G2.11), and contains two smaller enclosures on its northern edge. The larger and easternmost was F5735/8140 (0.53-1.3m wide, 0.5-0.7m deep, dated AD240-300), while smaller and to the west was F4793/4852, dated AD 200-280). The creation of this enclosure would have necessitated the backfilling of the previous southern boundary ditch F5736, as well as the eastern line of the main enclosure (F4815). At the northern end of the site, ditch F5013 is probably contemporary with this change (see below).

Western side

In the later period, the basic limits of the southern extension are expanded on the western side as ditch F5092 (G14) (0.5-1.4m wide, 0.1-0.36m deep) with F5318 (0.5-1m wide, 0.2-0.34m deep) forms a new southwest corner to the settlement. Inside, internal feature F5090 (0.8m wide, 0.17m deep) forms an internal partition with the corner of the primary settlement enclosure. The ditch continues south as F5353 (G21; see Area D below).

Southern Fields (Areas C/D)

In the later 3rd/early 4th century, a large square enclosure occupies the space between the southern edge of the southern core extension (Area B) and the northern edge of the southern field system (Area D). Defined by ditch F5387 (2.6-3.8m wide, 0.7-1.15m deep, dated AD270/300+) and F5418 (2.6m wide, 0.5m deep, dated AD270+), an area 39.5 by 41.5m (*c.* 1640 sq. m) is enclosed, but with no extant internal features (G18). In the mid 4th century, an internal division is added: F5389 (1.0-1.7m wide, 0.2-0.3m deep, dated AD330+). East of this main enclosure, a number of ditches form smaller enclosures (G27). F8220 (1.0m wide, 0.57m deep) with F8207 (1.1m wide), abut a southern enclosure F5414 (0.7-1.6m wide, 0.41 deep), with its associated ditch F8224 (0.94m wide, 0.32m deep). F5414 may actually continue as F5389.

Also running off the southern edge of the southern core extension and parallel to the G19 enclosure is a double ditch/gully line which links the main settlement system to the southern field system. Contemporary with and probably a continuation of F5318 (of G14, Area B; see above), is F5353 (1.0-1.5m wide, 0.33-0.5m deep, dated 120-200/240+)/1403 which runs down off the Area B enclosure to link up with the Area D fieldsystem. Cut parallel to this, 2.6-3.6m apart, is F5375 (1.1-1.4m wide, 0.15-0.40m deep, dated AD300+), the two ditches together probably flanking a bank and/or hedgerow (G21). Later on, the inner line is recut by the Area C enclosure and ditch F5001 (1.0-1.2m wide, 0.14-0.2m deep).

Human Remains (N. Dodwell)

Fragments of skull (adult parietal) were recorded in a ditch fill [1339] of F5418, at the north-east corner of the G18 enclosure. This ditch section also backs onto the south side of the square enclosure G28 (see above).

The Inhumation Cemetery (Area D)

At the southern end of the site, occupying a corner of the southern field system was an inhumation cemetery (G22; Figure 5.6). The origins of the cemetery would seem to be associated with an early cremation (F2084) that lies at the centre (see Chapter 4).

The Ditch System

The limits of the cemetery were demarcated by ditches F5360 (0.7m wide, 0.2m deep) and F5403 (*c.* 1m wide, 0.3m deep, dated 4th century), which closed off the corner of the field system as defined by the G21 ditches (F5353/5340) which see several recuts within the phase (F5365, F5345), but only along the length of the cemetery. At a later date, a much wider area around the cemetery is enclosed (G26) defined by ditches F5335 (2m wide, 0.6m deep), F5166 (2.0m wide, 0.64m deep), F5163 (*c.* 1.4m wide, 0.35m deep), re-cut by F1207 (1.4m wide, 0.23m deep) and F1021 (0.5m wide, 0.2m deep).

Human Remains (N. Dodwell)

Into the upper fill of ditch F5166, the remains of a partially articulated adult skeleton, F991 burial were found. Only the right side of the body is represented and the tibia is severely flattened, with head to the west.

Skeleton F991
Adult
A heavily truncated and disturbed burial lying on the north edge of ditch F5166. The body would appear to be orientated with its head (missing) to the west and if the skeletal elements are not too disturbed the position of the body appears very awkward. Only fragments of the right limbs and shoulder survive; the body would have been lying prone, the elbow is flexed back so that the hand would have rested on the shoulder, the leg flexed so that the knee is in contact with the elbow, the ankle with the hip. There is severe side to side flattening of the tibia and front to back flattening of the femur.

The Cemetery

At western entrance to cemetery was an elongated pit F5425. 1.67m long and *c.* 3.25m wide, it was very shallow at 0.12m deep. At either end of the pit, lay a carefully placed horse skull with an arrangement of stones at the snout, the two heads facing inward, toward each other. Incorporated into the backfill was 4th century pottery (Figure 5.7). The burials within the cemetery, which numbered 29 identified graves (but 30 individuals), have been divided according to two different criteria – orientation and location. The graves do seem to be oriented broadly either north-south or east-west, and using the boundary ditch F5403, lie to either side of this, with a couple of exceptions (Table 5.11; Figure 5.6). There is a clear tendency for burials south of and up to the cremation (F2084) to be oriented north-south, while those north of the cremation lie east-west. One burial lay outside the enclosure (F2004), oriented east-west. Some of the burials inter-cut, but it was rare that earlier burials were completely disturbed except in a few cases.

The Human Remains (N. Dodwell)

The degree of disturbance or truncation, the condition of the bone, and, as importantly which skeletal elements survive, effects the potential for determining the age and sex of individuals and of recognising any pathological conditions. As with the cremation cemetery these burials have been disturbed by ridge and furrow, later ploughing and to a lesser degree during machine stripping prior to excavation. In general the condition of the skeletons identified was poor. The nature of the soil, heavy clay, has resulted in the destruction of many of the bones and in the fragmentary nature of the surviving skeletal elements (none of the long bones are complete and many of the epiphyseal ends are damaged/missing). In addition the surfaces of many of the bones have been damaged by the burial environment and insect/root damage. Detailed on-site recording of all the skeletal material was conducted, as it became obvious that much of the material would not survive lifting.

General methods used in the osteological evaluation are those of Bass (1992), Buikstra and Ubelaker (1994) and Steele and Bramblett (1988). An assessment of age was based on the stages and epithyseal union and dental eruption (Ubelaker, 1989 fig. 71) and on the degree of dental attrition (Brothwell, 1981). No pubic symphyses survived and only very occasionally could the auricular surface of the pelvis be used to help determine age (Lovejoy et. al., 1985). The age categories used are the same as those used in the section on the cremation burials. There may be overlaps between categories or a broad category, such as adult, where insufficient evidence was present. The sex of the individual was ascertained where possible from sexually dimorphic traits on the pelvis and the skull and from metrical data. Because of the fragmentary nature of the material often only 2 or 3 traits could be observed and so sex, where attributed should be treated with a degree of caution. As no complete long bones were recovered, estimates of stature could not be made.

The Inhumation Burials (N. Dodwell, G. Monteil, N. Crummy & H. Cool).

The Human Remains (N. Dodwell)

Skeleton F2001
Middle adult female
Moderately preserved skeleton; the skull being close to the surface has been damaged by the machine and ploughing and, although complete is fragmentary. None of the long bones are complete and the vertebrae and ribs survive only as scraps. The head was in the east of the grave and the body was supine with legs and left arm extended and the right hand crossing the pelvis. Sub rectangular grave 1.70 x 0.65 x 0.20m. The majority of the teeth are loose, the anterior teeth are heavily worn and several are rotten with just the roots surviving. Pale brown/green mineralised plaque or calculus was recorded on the margins of the enamel and root. Both tibia shafts are flattened side to side (platycnemia). Disarticulated human bone, deriving from skeleton [2061] was recovered from the fill [2000] along with animal bone recovered from the foot of the grave (see Clarke, below). The woman was buried wearing a copper alloy bracelet on her right arm (see Crummy, below).

Skeleton F2004
Middle adult male
Poorly preserved skeleton. The skull was damaged by the machine, much of the pelvis was missing and all the surviving bones are fragmentary. The head was in the west of the grave and the body was supine and extended with arms tight against the body, hands resting on the pelvis. Sub rectangular grave 2.27

x 0.56 x 0.12m. Two teeth including the mandibular 3rd right molar are rotten and survive only as roots. 4 iron nails were recovered, either side of the skull and hips, and may indicate burial in a coffin.

Skeleton F2007
Middle adult
This skeleton has been heavily disturbed and truncated by a furrow. Most of the skull and the entire pelvis are missing, as is the torso. Only the mid shafts of the long bones survive and then only as scraps. The head was in the east of the grave and the body was supine and extended with both arms slightly flexed at the elbows. Ill-defined sub-rectangular grave, 1.90 x 0.40 x 0.17m. No sex was attributed; the only element available for sexing was the mastoid process, which was male. The anterior teeth are heavily worn and of the 15 loose teeth recovered 4 had severe carious lesions, in 2 cases large enough to nearly destroy the crown. All teeth had moderate deposits of calculus. Defects in the enamel, of a mandibular canine indicate a period of childhood illness or nutritional stress.

Skeleton F2010
Adult
Extremely poorly preserved skeleton damaged by the machine and ploughing. The dentition and face are missing as is the left arm and most of both legs. The remaining skeletal elements are fragmentary. The head was at the south of the grave, the body was supine, legs extended and right arm flexed with hand resting on left shoulder. Ill-defined, sub-rectangular grave, cut by F2017 to the south, 2.04 x 0.79 x 0.08m. No pathology observed. A sherd of 2nd/3rd century greyware, 1 nail and 1 nail shaft were recovered from the fill

Skeleton F2013
Older middle/ mature adult ?male
Poorly preserved skeleton damaged by the machine and ploughing. The face and the maxilla are missing as is the pelvis and torso. The remaining elements are fragmentary. The head was to the west of the grave, the body was supine with the legs flexed (left over right, knees pointing south), the right arm is extended and the left slightly flexed so that the hand rests over the pelvis. Sub-rectangular grave, truncated in the west by grave cut F2002, 1.40 x 0.55 x 0.20m Although the jaw is damaged at least 2 teeth were lost prior to death and heavy deposits of calculus, some of it subgingeval, were recorded on all the surviving teeth. A large caries was recorded on the loose 2nd maxillary premolar. The bodies of the surviving cervical vertebrae exhibit increased porosity. Both tibias exhibited side-to-side flattening (*platycnemia*). A large granite-type stone rested on the sternum.

Skeleton F2016
Adult
Poorly preserved skeleton. Again the dentition and the face are missing, as is the torso. The surviving elements are fragmentary. The head was in the east of the grave, the body supine, legs slightly flexed towards the south and the left arm extended (the right is disturbed). Sub-rectangular grave, 2.00 x 0.70-0.90 x 0.10m. Despite the abraded surfaces areas of striated bone, indicative of a non-specific infection were recorded on both tibias. Both tibias exhibit slight *platycnemia*. Hobnails were recovered from around the feet.

Skeleton F2019
Adult
Severely truncated skeleton. Only the lower legs and distal and feet survive and they are fragmentary. The head would have been in the south of the grave and the lower legs are extended. Grave cut had been truncated to the natural and what little survived had no recognisable edges, being so shallow. Striated new bone, indicative of a non-specific infection was observed on the medial aspect of the mid shaft of the right tibia.

Skeleton F2022
Female, young adult
Although all the surviving elements exhibit post-mortem breaks and abraded surfaces the bones are in far better condition than many of the other burials. The machine truncated the right side of the skull, including the jaw. The head was in the south of the grave, the body supine, legs extended, both arms flexed; right across the stomach, left on the sternum. The grave cut was indistinct, but no deeper than 0.11m. A septal aperture, a non-metric trait more common in females than males, was recorded on the left humerus. No pathologies were observed. A large quantity of disarticulated bone, belonging to an

individual not originally identified in the cemetery was recovered from the fill. This material [2021] is described below.

Skeleton F2025
Middle/Mature adult
The skull, the right clavicle and the feet have been truncated by the machine and ploughing. Again the surviving bones are very fragmentary. The head would have been at the south end of the grave, the body supine, legs extended, both arms flexed; the left hand rests on the inside thigh and the right hand rests on left forearm. The middle of the body slumps into the fills of earlier burials, F2028 and F2049. Sub rectangular grave, 1.8m x 0.50m x 0.12m. Osteophytes and increased porosity were recorded on the articular facets of the sacrum and surviving lumbar vertebrae. There was front to back flattening in the proximal shafts of the femora (platymeria) and side to side flattening of the tibias (platycnemia). Disarticulated human bone was recovered from the grave fill.

Skeleton F2028
Older middle/mature adult male
Much of the facial area including the maxilla was truncated by the machine, the distal ends of the upper arms, the lower arms, torso and upper legs have been truncated by the later grave containing skeleton F2025. The surviving bones are fragmentary. The head was in the south of the grave and the body was supine and extended. 1.8 x 0.6 x 0.17m. The surviving teeth are worn and six mandibular teeth were lost before death. Disarticulated human bone was recovered from the grave fill.

Skeleton F2031
Young/middle adult
This skeleton was disturbed by the machine and by earlier ploughing. The skull and shoulders are missing as are the feet, and the surviving bones are fragmentary. The head would have been in the east of the grave and the body was supine and extended with hands lying alongside the thighs. Severely truncated, sub-rectangular grave, 2.00 x 0.60 x 0.05m. No pathology was observed. An L-shaped piece of iron, possibly a buckle fragment was recovered directly below the pelvis (<5147>).

Skeleton F2034
Mature adult female
The left side of the skull has been ploughed away and all the surviving bones are fragmentary. The head was in the south of the grave and the body was supine with legs extended and arms flexed, right over left, right hand on left forearm and left over right hip. This sub-rectangular grave was cut into the top of a ditch fill, 1.60 x 0.60 x 0.07m. The scraps of surviving lumbar vertebrae exhibit increased porosity and osteophytes on the articulating facets, indicative of degenerative joint disease. Three mandibular teeth were lost prior to death and carious lesions were recorded on 4 teeth. Calculus was observed on all the teeth including the occlusal aspect of the right 1st molar which suggests that the occluding maxillary tooth (maxilla not present) was lost some time before death. Probable finger ring on the left hand (see Crummy, below).

Skeleton F2036
Mature adult
The body is poorly preserved and the much of the skull and the right arm have been truncated and damaged by a land drain. The head was in the south of the grave and the body was supine, legs flexed to the right, knees touching the side of the grave, arms flexed over chest, right hand over left. Sub rectangular grave, 1.90 x 0.70 x 0.18m. The skull particularly the occipital part is thickened. Raised plaques of new bone, characteristic of a non-specific infection were recorded on the lateral aspect of the distal shaft of the left tibia. Increased porosity and marginal osteophytes were noted on a cervical vertebra facet. Five teeth from the surviving dentition were lost prior to death; the sockets have healed over completely and the opposing teeth are unworn indicating that they were lost a considerable time before death. Heavy deposits of calculus were recorded on the buccal aspects of the surviving molars.

Skeleton F2039
Older middle/mature ?female
The skeleton is extremely poorly preserved; the skull, except for fragments of mandible and the lower legs and feet have been truncated by earlier ploughing and the remaining skeleton is very fragmented. The head was in the east of the grave and the body was supine and extended with both arms slightly flexed, hands resting on the pelvis. Two deciduous mandibular incisors, presumably from F2042 were

recovered close to the shoulder (the relationship between this adult and the infant is unclear). Sub-rectangular grave, 2.1 x 0.7 x 0.08m. Increased porosity and osteophytes were recorded on the fragmented sacral body. From the surviving fragmentary mandibular dentition two teeth were lost prior to death and the two incisors are worn to the roots. Some coffin nails associated with the skeleton. Disarticulated human bone was recovered from the grave fill.

Skeleton F2042
Infant (2years±8months)
An extremely poorly preserved infant represented only by its loose dentition (a mixture of deciduous and permanent teeth), tiny skull fragments, shafts of the left arm and fragments of vertebrae and ribs. The head was in the south of the grave, the body was supine with the left arm slightly flexed at the elbow. No grave cut was recorded; the body lay on the ground surface. No pathology was observed. The child was buried with blue glass beads, from their position presumably forming a necklace (see Cool, below).

Skeleton F2044
Subadult/adult
This individual has been severely truncated by ploughing and is represented only by the fragmentary remains of the right lower leg. The bones are articulated and orientated so that the head would have been in the east of the grave. No grave cut was recorded and no pathology was observed.

Skeleton F2046
Older middle/mature female
Poorly preserved skeleton, damaged by furrow; the lower legs are particularly fragmentary. The head was in the north of the grave and the body was supine with legs slightly flexed to the right at the knees and arms flexed, wrists crossing at the waist, left over right. Sub-rectangular grave, 2.52 x 0.80 x 0.30m. No pathology was observed. Front to back flattening of the proximal half of the femurs (platymeria) was observed but neither of the tibias was misshapen. This adult female was buried with two bronze bracelets, one worn on each wrist (see Crummy, below). One of these had decorated snakehead terminals. An area of organic staining was seen on the chest area and *could* be evidence for a bag or box.

Skeleton F2049
?Adult female
Poorly preserved skeleton whose upper body (above the elbows) is missing having been truncated by either/both skeletons F2025 and F2028. The surviving bones are very fragmentary. The head would have been in the south east of the grave and the body was supine and extended, right hand (not present) between the legs, left on left thigh. Sub-rectangular grave, 1.80 (truncated) x 0.50 x 0.25m. No pathology was observed. If the disarticulated fragments of skull and mandible found in [2024] (the fill for skeleton F2025) belong to this woman, then she is likely to be a middle/mature female. A small grey ware flagon was buried beside her left ankle and iron hobnails were collected from the soles (balls only) of the feet (see Monteil and Crummy, below). Iron nails, possibly from a coffin were recorded along the right side of the body.

Skeleton F2052
Middle adult female
Poorly preserved and fragmented skeleton. The head was in the east of the grave and the body lay on its right side tightly crouched. Both legs are tightly flexed but the right more so than the left; the heel almost touches the pelvis. Right hand is under the head and the left touches the left knee. Ovoid grave cut, 1.20 x 0.55 x 0.15m. The vertebrae survive only as scraps but porosity and marginal osteophytes were recorded on the bodies of both a cervical and lumbar vertebrae; the facets of the upper vertebra also exhibited small patches of eburnation. Osteophytes and increased porosity were recorded on the right articulating facet of the sacrum and on the clavicular surfaces of both scapulae. A large caries was recorded on each of the 3rd maxillary molars, the 2nd left mandibular premolar is rotten and survives only as a root and the 1st left mandibular molar was lost prior to death. Calculus was recorded on the surfaces of all of the surviving teeth.

Skeleton F2055
Mature adult female
The skeleton is moderately preserved although all of the surviving bones are fragmentary. The head was in the north of the grave, the body was supine, legs slightly flexed to the right, left arm extended, right arm slightly flexed hand touching hip. Sub-rectangular grave, 1.60 x 0.80 x 0.15m. As with skeleton F2034, this grave is cut into the fill of a ditch F5403. Severe osteoarthritic changes were recorded in the left hip and right shoulder joints. Large areas of eburnation, or polishing resulting from bone rubbing directly on bone were observed on both the head of the left femur and the acetabulum. Severe porosity on the joint surface and osteophytes around the joint margins were also noted. The morphology of the head of the right humerus is also altered with porosity and eburnation on the joint surface and osteophytes around the margin recorded. Similar changes were recorded in glenoid cavity of the scapula. The sternal end of the left clavicle also exhibited increased porosity and a small area of eburnation on the joint surface and osteophytic lipping around the margins. In the right hand osteophytes and increased porosity, almost pitting, have deformed and altered the morphology of one of the interphalangeal joints. Marginal osteophytes, indicative of incipient joint disease were recorded on the proximal left ulna and left glenoid cavity. Both the femur and tibia shafts exhibit a degree of front to back and side-to-side flattening respectively. In addition the cortical bone in the mid shaft of the left tibia is thickened, considerably reducing the size of the medullary cavity in comparison with the right. Deep impressions on the internal surface of the skull, blood vessels usually only seen on the parietal portions of the skull were recorded on the inside of the frontal bone above the orbits. Although damaged, small holes on the orbital roofs, indicative of anaemia were recorded. All the surviving teeth are severely worn and a total of 9 teeth were lost prior to death.

Skeleton F2058
Young adult male
Moderately preserved but again fragmentary skeleton. The head was in the south of the grave tight against the cut, the body was supine and extended. The right hand crosses the pelvis and lies between the legs, the left hand lies palm upwards against the grave cut. The spine appeared twisted, the knees almost touch and the right foot rests on the left. Deep, rectangular grave, 2.30 x 0.90x 0.45m. Peri-mortem fractures were noted across the shafts of left 2nd metacarpal and a middle phalange. They were initially observed on site when the hand was in its articulated position and would have occurred prior to burial possibly by a heavy stamping action. A total of four caries were recorded on three teeth and from the surviving dentition at least 2 teeth were lost prior to death. The mandible has pronounced inferior margins and this man would have had a distinctive jaw line when alive. Numerous iron nails were recovered around the body suggesting burial in a coffin and hobnail tacks were recorded around the feet (see Crummy, below). The approximate dimensions of the coffin, as evidenced by the nails are 2.00 x 45-50m.

Skeleton F2061
Juvenile (10 years±30months)
Moderately preserved but fragmentary juvenile disturbed and in places truncated by the later burial of skeleton F2001. The disarticulated bones recovered from grave fill [2000] are from this immature individual and are predominantly limb bones and skull fragments. The head was in the east of the grave and the body was supine and extended. Sub rectangular grave, 1.20 x 0.5 0.05-0.25m. A mixture of deciduous and permanent teeth were recovered and medium deposits of calculus were recorded on the deciduous teeth, particularly on the surviving molar.

Skeleton F2064
Adult
Extremely poorly preserved skeleton, with only parts of the skull, long bones and right hand surviving as small fragments and scraps. The fragments of skull lay in the south of the grave and the body was supine and extended with the right hand probably resting over the pelvis. The grave cut had been truncated by Medieval ploughing. No pathology was observed.

Skeleton F2069
Older subadult/young adult
Poorly preserved skeleton with only limb shafts and skull fragments surviving. The head, which had been dragged by the plough, was in the south of the grave and the body was supine and extended. The right lower arm and hand are missing but the left arm was flexed at almost 90° across the body. Sub

rectangular cut, 2.00 x 1.10 x 0.25m. No pathology was observed. 4 nails were recovered from the fill and may represent a coffin.

Skeleton F2073
Adult
Heavily truncated individual with only fragments of the legs and arms surviving. The head (not present) would have been in the south of the grave and the body would have been supine with extended legs. The grave cut had been completely truncated by ploughing and machining. A glass vessel fragment and two hobnails recovered from the machined spoil and are likely to have come from this grave.

Skeleton F2076
Younger middle adult male
Heavily truncated skeleton with fragments of the skull, legs and right arm and hand surviving. The head was in the east of the grave and the body would have been supine and extended with the right hand was tightly clenched. The grave cut had been completely truncated by ploughing and machining. Marginal osteophytes and slight porosity were recorded on the right proximal ulna. Smooth, cream new bone indicative of a non-specific infection was observed on the posterior of the distal left femur. Lines of enamel hypoplasia were recorded on the mandibular canine. The 1st left mandibular molar was lost soon before death as evidenced by the semi remodelled tooth socket. A large caries was located on the medial aspect of the adjacent molar. The man was buried in hobnail boots, and a ceramic bowl (see Monteil, below) was found beside his right elbow.

Skeleton F2079
Adult
This grave was invisible until a second, deeper phase of machining occurred and although the machined spoil was carefully examined only a small quantity of bone was recovered. The skeleton was extremely truncated and was represented only by fragments of the left humerus, shoulder girdle and scraps of ribs and vertebrae survive. The head (not present) would have been in the east of the grave and the body would have been supine. No pathology was observed.

Skeleton F2082
Young adult female
Moderately preserved, fragmentary skeleton whose left scapula and humerus had been ploughed out. The head was in the north of the grave and the body was supine with right arm and legs extended and left arm slightly flexed at the elbow. Sub rectangular grave, 1.80 x 0.50 x 0.25m. Lines of enamel hypoplasia, resulting from childhood illness or nutritional deficiencies were observed on the maxillary central incisors. A beaker was interred beside the left foot and hobnails were recovered from around the feet (see Monteil and Crummy, below). Fragments of broken glass deriving from several vessels were found in a small heap lateral to the left lower leg (see Cool, below). The metal clasps/strap (<5159>) found below the glass may be evidence of a fastening to a decayed bag in which the glass was originally carried.

Skeleton F2086
Middle adult female
Moderately preserved, fragmentary skeleton. The head was in the west of the grave and the body was supine and extended, arms tight against the torso, the left arm flexed slightly with hand rather awkwardly everted, palm upwards and slightly clenched. Wide, rectangular cut with steep sides, 1.90 x 0.92 x 0.13m. At the right elbow new bone entirely covers the radial notch of the ulna and there is a small area of eburnation and porosity overlying it. A small (5mm) cloacae from which puss would have drained was recorded on the tuberosity of the radius and is indicative of osteomyelitis. Its edges were relatively sharp suggesting that it was still active at death or just starting to heal. Eburnation and porosity was recorded on the surviving carpals and joints of the metacarpals (both distal and proximal) of the left hand. These changes are characteristic of osteoarthritis and this joint disease might account for the position of the left hand. Similar but less severe changes were recorded in the right hand. A small area of eburnation and increased porosity again indicative of osteoarthritis was recorded on the head of the left & right talus. Slight deposits of calculus were recorded on the buccal aspects of the mandibular incisors. The woman was buried wearing a copper alloy bracelet on each wrist and footware is indicated by hobnails. A bronze ring was found apparently not worn on a finger but held in

the left hand. Nails recovered from below and around the body have been interpreted as evidence for a coffin (see Crummy below).

Disarticulated Bone from Grave Fills

Several of the graves intercut and there is evidence that disturbed bone was redeposited in the later graves. Disarticulated human bone was recovered from five grave fills (Table 5.12). The bone from four of these fills, [2000], [2024], [2027] and [2038] derives from earlier interments which were identified on site. However, the disarticulated bone in grave fill [2021] does not derive from any of the identified burials and therefore represents another individual. The skull fragments, [2066] and [2067], found on the machined surface may represent two further individuals but they are just as likely to derive from one of the articulated skeletons already recorded. Because the disarticulated material from grave fill [2021] derives from an individual as yet un-recorded in the cemetery a detailed description of the material is presented below. Details of the disarticulated material from the other grave fills are in the archive.

Disarticulated bone [2021], grave fill of skeleton F2022
Male, mature adult
Almost an entire body is represented and there is nothing to suggest that these bones come from more than one individual i.e. there is no duplication of skeletal elements or contradictory age/sex attributes. The condition of this disarticulated material is far better than any of the *insitu* burials. The majority of the bones were placed/thrown onto the body of F2022, below her waist and lay directly on the body. The position of several of the skeletal elements in relation to each other suggests partial articulation of this body when it was redeposited i.e. the right tibia, femur and pelvis. Degenerative joint disease was recorded in several locations; marginal osteophytes were noted on the right acetabulum and femoral head, and the distal articular surface of the right radius. The articular facet of the right radius and the superior articulating facet of a thoracic vertebra all displayed an increase in porosity. The metopic suture, although partially fused is still visible. A total of at least 15 teeth were lost prior to death; 10 from the lower jaw and 5 from the maxilla.

The Faunal Remains (A. Clarke)

A very few of these burials contained a limited amount of animal bone. Respectively the following remains were recovered from Graves F2058, F2001 and F2046; a very eroded fragment of goat humerus, a horse incisor and a cow molar. These bones had not been placed on or around the inhumations; rather they were recovered from the fills of the burials concerned. This latter point combined with the fact that a small assemblage of fragmentary bone was recovered in Area D from the phases preceding the inhumation cemetery, leads to the conclusion that any animal bone recovered from the grave fills is most likely to be residual.

The inhumation cemetery did however produce one feature that renders it very interesting. The entrance to the cemetery is located immediately to the east of the graves and it was here that a shallow pit (F5425) was revealed. The pit was approximately 3.5m long by 1.5 m wide, aligned north to south and contained two complete horse skulls. It was patent that this was an act of deliberate deposition as the skulls were placed, one at either end of the pit, facing each other in a direct north to south alignment. Added to this a number of stones (flint and sandstone) were arranged around the maxilla area of each skull.

The skulls themselves were in a very poor state of preservation; they were intact and complete but the bone was so cracked and friable that it was clear that they would fragment when being cleaned. To this end the author cleaned both skulls so as to attempt to gain as much osteological data as possible. It was possible to age each of the skulls to 3-4 years (northern skull) and 8-10 (southern skull) years of age. No canine teeth were observed, but as the absence of this tooth also occurs in males it cannot be confidently stated that both of these individuals were mares. No cut marks of any kind nor any evidence of gnawing was observed so it is considered likely that the skulls were still fleshed when deposited and then buried very rapidly afterwards.

Plant Remains (R. Ballantyne)

All ten samples from Area D contain very limited charred plant remains, usually individual grains or chaff fragments of glume wheat accompanied by a low amount of highly fragmented wood charcoal. The charred material appears to be residual surface debris either re-worked into grave fills, or accumulated gradually in enclosure ditches. Occasional small remains of oyster, mussel and eggshell fragments indicate that a low amount of such material was also present on the surface.

Copper alloy Jewellery (N. Crummy)

F2086

a) <5140> <5141> SF 288/SF 289. F2086. Period III. Pair of complete penannular bracelets (Figure 5.9: 3-4). SF 288 has iron staining on much of the circumference. The hoop of each is plain and tapers towards narrow terminals. Those of SF 288 are moulded and the segmented effect at the terminals is probably derived from earlier, clearly shown, snake's head decoration (Johns 1996, 109-110, figure 3.3). Those of SF 289 are badly corroded. Each bracelet has a maximum internal diameter of 57 mm, and a maximum hoop thickness of 4 mm. Bracelets with plain hoops of this form and minimally decorated terminals date to the late 3rd or 4th century (*cf* Crummy 1983, fig 42, 1664, fig 45, 1710).

b) <5139> SF 287. [2086] F2086. Period III. Three fragments from a corroded and worn finger-ring of variable cross-section Figure 5.9: 5). The surface is not well-preserved, and this may be a simple plain hoop, or may have a slight bezel on the outer edge (as Neal & Butcher 1974, fig 60, 119). Internal diameter approximately 15 mm. The narrowness of the hoop suggests it belongs with the large number of thin finger-rings found in the mid to late 4th century, contemporary with the fashion for thin strip metal bangles.

F2046

<5138> SF 246. Period III. Group of three penannular bracelets, two forming a pair (Figure 5.8: 4-5):

1-2) Broad cast hoop, with a plain central angular moulding flanked by rounded mouldings marked with slight angled grooves to give a cable effect, and with plain marginal mouldings. The straight terminals are flat, set close together, and are marked with a wide lozenge formed by a two lines of dots, the internal points running up onto the central moulding. Internal diameter 58 mm, section 13 by 2 mm.

3) Plain hoop, more or less D-shaped at the mid-point, with flat blunt-nosed terminals in the form of debased snake's heads. The limit of the decoration is defined by a pair of incised transverse grooves, and slanting grooves are used to give the effect of scales. Maximum internal diameter 56 mm, maximum hoop thickness 4 mm.

The broad bracelets probably date to the 2nd century. Wide bracelets with complex cast decoration first occur in mid 1st century AD military contexts at Colchester and their decoration appears to be related to that on the bows of Aucissa and Hod Hill brooches (Hawkes & Hull 1947, pl 100, 29; Crummy 1983, fig 40, 1586; Crummy 1992, fig 5.5, 361-2). Of four wide bracelets from Baldock, one is of early date and three others come from contexts dated variously to the late 2nd, 3rd and mid 4th centuries,

though the two latter are almost certainly residual (Stead & Rigby 1986, fig 52, 163-6). All these bracelets are thinner in section than the Vicar's Farm pair, and have a characteristic change of the alignment of the decoration at the terminals from longitudinal to transverse, while the lozenge used here is still essentially longitudinal. The mock cable decoration is reminiscent of the applied beaded wire on a hinged gold bracelet from Rhayader, Powys (Cool 1986, fig 3; Johns 1996, fig 5.25), a feature which also occurs on items such as the gold wheel pendants from the late 1st or early 2nd century Backworth hoard (Tait 1976, no 169 c-e).

F2001
<5136> SF 229. Period III. Strip bracelet, in fragments (Figure 5.8: 1). The thin rectangular-section hoop is plain, and was closed with a hook-and-eye fastening. The very end of the eye is missing. Internal diameter approximately 53 mm, section 5.5 mm high by 1 mm thick. Strip bangles are rarely plain, as shown by the collections from Lankhills, Winchester (Clarke 1979, table 34, D1) and from Colchester (Crummy 1983, 38-45). Examples with hook-and-eye fastenings come from graves at Lankhills ranging in date from *c* AD 330 to 380, and at Colchester from graves dated to later than AD 360 (Crummy 1983, nos 1700, 1708; Crummy *et al* 1993, table 2.67, G24, G378).

F2034
<5137> SF 244. Fragments of very decayed copper-alloy fixed in thick clay, together with a small disc, with sunken centre, of self-coloured glass. Identification uncertain, but perhaps all that remains of a finger-ring. Diameter of glass disc 8 mm.

Iron *(N. Crummy)*

F2082
<5161>. [2082] F2082. Period III. Stud or nail with large convex head. Length 35 mm (incomplete), diameter of head 36 mm.

Hobnails

Hobnails are found on Roman shoes (*calcei*) and sandals (*soleae*), as well as the heavily-nailed *caligae*. They vary considerably in the number used, and are often arranged in decorative patterns (Rhodes 1980; MacConnoran 1986). None are illustrated. They have not been X-rayed and where they are heavily encrusted with corrosion the precise numbers present are uncertain. Both heavily-nailed and more lightly-nailed shoes are represented. The heavily-nailed shoes from [2058] must have had the Type C nailing pattern found on men's shoes from London identified as military *caligae* (Rhodes 1980, 113-14). The smaller nails and lower numbers from the other shoes suggest that both Type A and Type B nailing patterns were also represented here (Rhodes 1980, 114; MacConnoran 1986, 218).

Manning 1985, Type 10 hobnails:

<5146>. [2015] F2016. Twenty-six(?). From both left and right shoes.
<5148>. [2033]. One.
<5153>. [2049] F2049. Fifty-one.
<5154>. [2058] F2058. Seventy(?) from the right shoe; 71(?) from the left shoe; 55(?) from the junction of both shoes.
<5157>. [2076] F2076. Fifty(?).
<5158>. [2076] F2076. Three.
<5160>. [2082] F2082. Thirty-two.
<5161>. [2082] F2082. Two.
<5162>. [2086] F2086. Ninety-three?
<5162>. [2086] F2086. Left foot. Two.
<5162>. [2086] F2086. Foot end. Four.
<5165>. [2093] F2094. One (identification uncertain).

The Pottery (G. Monteil)

Of the inhumations found on Vicar's Farm, only three were associated with pottery offerings.

F2049
Flagon/bottle with rilled, carinated shoulder and an abraded plain everted rim (150g, 0.05 eves) in a fine sandy greyware (FSGR). This flagon/bottle displays characteristics that strongly point out to a Suffolk origin, probably Wattisfield (Tomber and Dore 1998, 184). The matrix is quite fine and very micaceous, ill-sorted small black inclusions are visible to the naked eye and it is reduced. (Figure 5.8: 3)

F2076
Necked bowl (272g, 0.33 eves) in a coarse sandy red-slipped ware (CSRS) (Figure 5.9: 1)

F2082
Funnel necked beaker (20g, 0.25 eves) in a fine calcareous grey fabric with barbotine dot decorations. (FSGR) (Figure 5.8: 10)

The Glass (H. Cool)

F2042; <5135>. (Figure 5.8: 2)

Segmented beads; opaque blue; wound and then crimped to form 4 or 5 segments a bead. 5 complete examples and 14 fragments currently ranging from 1 to 4 segments a length probably representing another bead. Length of complete beads 10-11mm, diameter 2.5 - 3mm., 1.5mm. Total length c. 140mm.

Segmented beads such as these are primarily a late 3rd to 4th century form (Guido 1978, 92), though examples are occasionally found earlier such as the one from an early 2nd century context at Caerleon (Brewer 1986, 148 no.11) The beads in this inhumation were found positioned as if from a necklace and the total length of beads found are adequate for this purpose. The infant in the grave would almost certainly have been a girl because bead necklaces such as these were not thought appropriate for males, and where it is possible to check the associations of biological sex and glass beads in graves, there is normally a strongly female association (Cool forthcoming). The presence of a necklace with a little girl who was scarcely older than a baby is of interest. Gowland (2001, 159) has noted that goods of any kind and especially personal ornaments are rare with infants of less than 4 years at the large cemeteries at Butt Road Colchester and Lankhills Winchester, possibly reflecting that the formation of a gendered identity was not perceived to take place until after that age. The composition of the necklace is also slightly unusual in that glass bead necklaces are usually made up of a range of beads of different colours (see for example Guido 1978, pl. IV), rather than the single colour and type seen here. It is possible that the necklace with this baby was provided less as a statement of her gender, and more as an amulet like the phallic pendants buried with a baby at Catterick (Wilson forthcoming). A glass bead necklace is a less obviously protective device than a group of phallic pendants, but here it may have been the single colour that was important.

F2082; <4340> / SF 262. (Figure 5.8: 6-9)

a) Funnel-mouthed jug (Figure 5.8: 6). Blue/green; rim and handle in four joining fragments. Funnel-mouthed rim, edge fire-rounded. Spiral trial of 4 turns on neck with thick trail below rim edge applied over upper one. Three ribbed handle applied to neck, trailed up to rim, looped back to form thumb rest, reattached to upper part of attachment, trailed down then up; broken at point where handle leaves attachment folding. Present height c. 35mm, width of handle 17mm.

b) Bottle. Blue/green. 3 fragments of angular reeded handle (Figure 5.8: 9).

c) Prismatic bottle. Blue/green. Base fragment. Base design - one small circular moulding inside a (?) slightly curved moulding. Dimensions 26 x 21mm. (Figure 5.8 : 7)

d) Prismatic bottle. Blue/green, many small bubbles. Base fragment. Pointed tips of 4 pellets or longer mouldings pointing towards side. These and more central moulding obscured by pontil scar. Possibly deliberately flaked to sharp edge along one side. Dimensions 45 x 22. (Figure 5.8 : 8)

e) Square bottle. Blue/green. 2 body fragments.

f) Prismatic bottle. Blue/green. 2 shoulder fragments.

g) Prismatic bottle. Blue/green 21 flat body fragments.

h) Body fragment. Blue/green. Melted.

i) Body fragment. Pale greenish colourless; many small bubbles. Convex-curved.

The group of glass fragments found with the inhumation F2082 was derived from a large number of different vessels. There are definitely a minimum of four vessels represented by ***a, c d*** and ***i*** but most of the square and prismatic bottle body fragments ***e-g*** clearly come from different bottles than those represented by ***c*** and ***d***. The earliest period when this accumulation could have been assembled is the later 3rd century. The square and prismatic bottles represented by ***b-g*** were common finds of the later 1st to early to mid 3rd centuries (Isings Form 51; Price and Cottam 1998, 194-200). Examples with pontil scars on their bases such as ***d*** tend to be later rather than earlier in that range. The funnel mouthed jug ***a*** has the thick trail below the rim which is typical of later 3rd and 4th century jugs, flasks and bottles, though the blue/green glass it is made of argues for a 3rd rather than 4th century date (Cool and Price 1995, 134-5) as in the 4th century they tend to be made of greenish colourless bubbly glass. This distinctive type of glass comes into use during the later 3rd century and the accumulation includes one fragment of it (***i***).

Though it is simple to offer a date for the group, suggesting why it should have been gathered together, possibly enclosed in a bag and then placed in the grave is much more difficult. Visually the group is predominantly blue/green, some fragments tending towards the blue end of the spectrum and others towards the green. Only ***i*** stands apart from this. They are all different shapes, sizes and weights though a preference for flat pieces may be noted (***b-d, g-h***). In total they weigh 152g which does not appear to approximate usefully to any Roman unit of measurement unless it is an underweight half *libra* (162-163g - for Roman weights see RIB II.2, p. 1). In Roman vessel glass assemblages it is not unusual to find fragments that have been re-used for some purpose. The three most common forms of such re-use are deliberate flaking to form a sharp cutting edge, the trimming of a base with base ring to form a disc and the trimming of a flat fragment from a bottle to form a counter. With the possible exception of ***d***, no such re-use can be seen on any of these fragments. The group does not include any fragments which might attract attention because of their bright colours, unusual shape etc so it would be very hard to argue that this was some form of cache of charms like the group found in a cist at Cairnhill, Aberdeenshire (Stevenson 1967).

All in all, this accumulation is rather undistinguished and pedestrian, yet obviously it has some significance to the deceased or those who conducted the funeral. The fact that the fragments are clearly from a large number of vessels and do not join makes it unlikely that we are looking at the remains of vessels used during the funeral as was the case with a group of beakers found with a burial at Welford, Warwicks (Booth

1994). Broken and incomplete items have occasionally been found deliberately deposited with the deceased as in the case of an inhumation of a child at Linton, Cambs where upper part of a dolphin-handled glass bottle and half a shale armlet were placed between the thighs (or possibly on them originally). This grave also included pottery vessels placed in the grave as broken pieces (Liversidge 1967, 27). The grave of a 5 to 12 year old child in the London East cemetery included broken fragments of glass, interestingly including a similar dolphin-handled bottle neck. The other broken fragments however came from a brightly coloured polychrome vessel and could have been chosen for their appearance (Barber and Bowsher 2000, 186 fig. 90).

The London burial seems to fall into the tradition of burying young girls with amulets, dolls and *crepundia* (miniatures, things of significant shape or appearance or which made noise) perhaps as symbols of the weddings that they died too young to experience (Martin-Kilcher 2000). It has also been noted *(ibid* 73) that others who died before their time such as women in childbirth may also have been marked out on their burial in similar ways. As noted above there appears nothing in this group of fragments to suggest, to my eyes, an amuletic significance, but perhaps they should be viewed within the same tradition. It is possible that the fragments provide us with a clue that the death of the woman was viewed as unusual or premature in some way.

Discussion (N. Dodwell)

Demography and Pathology in the Inhumation Cemetery

As stated at the start of this section the preservation and completeness of a skeleton determines the quality of information that can be gleaned from the material. Unfortunately at Vicar's Farm the heavy clay in which the bodies were interred and the degree of truncation severely limits what can be said about the material. Many of the adults were aged solely on the degree of dental wear, which is dependent on factors such as diet and food preparation and several individuals were sexed using only 2 or 3 diagnostic traits.

A total of 30 individuals were recovered from the 29 graves (this includes the disarticulated material in grave fill [2021]. Of these 27 are adult, 1 is older subadult/adult, 1 is a juvenile and 1 is an infant. Of the 27 adults 10 have been tentatively sexed as female, and 6 as male. Given the small size of the burial group and that 11 adults could not be sexed, the female to male ratio is not significant. Immature individuals are underrepresented but as discussed with regard to the cremation cemetery this is a common observation on most archaeological cemeteries and is usually attributed to differential burial practices or an aggressive burial environment. The heavy clay and severe truncation at Vicar's Farm does not favour the preservation of immature remains. One infant, F2042 aged approximately 2 years old and wearing a blue glass necklace was identified in the cemetery showing that individuals of that age *were* afforded similar burial rites (or at least interment in the same cemetery) as adults. There are 3 instances of neonate burial in the settlement itself in non-burial features and these are roughly contemporary with the inhumation cemetery suggesting that infants of a very young age were afforded different rights to those slightly older.

Joint disease is one of the commonest recorded pathologies observed in modern populations and in archaeological material. At Vicar's Farm the preservation of joint surfaces is poor and very few vertebrae survive. Despite this, 7 adults exhibited changes characteristic of osteoarthritis (as described by Rogers and Waldron, 1995, 32-46) with the spine being the most common site in the body affected. Other parts of the body affected included the hip, shoulders, the hands and feet. Although joint disease is not activity specific all those affected are in the middle to mature adult age bracket, which is a common pattern suggestive of a hard working, physically demanding lifestyle.

Dental hygiene does not appear to have been a priority amongst this population. Mineralised plaque or calculus was recorded on the teeth of 8 individuals in the cemetery. Medium deposits were even recorded on the deciduous dentition of the juvenile F2061. In the cemetery caries were recorded in the dentitions of 6 individuals, and 9 individuals suffered ante-mortem tooth loss. Given that the dentition of 9 individuals was missing and that many of the surviving teeth were loose, prevalence rates of caries and ante mortem tooth loss have not been calculated.

Episodes of childhood disease or malnutrition in 3 individuals are evidenced by enamel hypoplasias, which are defects in the enamel. An off-white mineral with small worm-like lesions covered many of the surviving teeth and may have obscured evidence of further enamel defects. Cribra orbitalia which is indicative of childhood anaemia was recorded in the orbit of 1 individual, F2055 a mature adult female. The aetiology is multifactorial and the anaemia could have resulted from an iron deficient diet or parasitic infection.

Although not pathological the morphology of the lower limbs should be noted. Platycnemia, the excessive side-to-side flattening of the tibial shaft was observed in six adults in the cemetery and one, F991 outside it. Two of these individuals (three including F991 also had femurs with front–to–back flattening of the proximal femur shaft or platymeria. The aetiology of platycnemia and platymeria is far from understood and much contested but nutritional deficiency has been cited as at least a partial cause, as has the persistent adoption of the squatting posture when at rest (Kennedy 1989, 148-50).

Coffins and grave goods

Eight of the burials, would appear to have been in coffins as evidenced by the nails recovered around the skeletons.. The recovery of hobnails around the feet of seven individuals would suggest that they were buried either with or wearing foot wear. There are many instances where shoes have been placed in the grave, rather than being worn, for example the eastern cemetery, London (Barber and Bowsher 2000, 137). Both males & females were buried in coffins and with footwear, and the absence of hobnails found with immature individuals may just be because they are under represented as an age group. Correlations did not exist between grave orientation, footwear and/or coffins. Seven individuals were accompanied by grave goods, or at least grave goods that had survived. Bracelets, finger rings, a glass bead necklace, ceramic vessels and a small cache of glass fragments were amongst the finds.

The graves and the layout of the cemetery

Ridge and furrow and modern ploughing have truncated all of the cuts to a greater or lesser degree and although there was great variety in the depth of the graves, the majority were less than 0.15m. Many of the skeletons were identified directly on the machined surface and yet skeleton F2058 was buried almost half a metre below this surface. Although it is likely that we have the full extent of the inhumation cemetery it is highly probable that further graves have been removed over the years.

Very few of the graves intercut and when they do they give the impression of being done intentionally; this suggests that the graves were marked in some way and it is tempting to think that there may be some familial relationship between those that cut each other.

Disarticulated human bone was recovered from five grave fills and derives from earlier interments. In four cases the bone came from the skeleton that had been disturbed by the later grave. Reinterment of disturbed bone, if not done with exceptional care was done, and the bones were placed/thrown directly on the later body, possibly suggesting that reburial was deemed to be necessary. For instance the loose juvenile bones that were found in F2061 lay directly on top of skeleton F2001 and those from grave fill [2021] lay directly on skeleton F2022. The disturbed femur and tibia of the juvenile were in an articulated position as were several of the skeletal elements from grave fill [2021]. Although we cannot know the sensibilities of the Romans who dug the graves they are likely to have encountered not just dry bones but body parts and perhaps this, together with the fact that they would have been disturbing relatives/acquaintances, explains the seemingly deliberate reburial of the disturbed material.

With the exception of skeleton F2052 who was buried on her side in a crouched position, the skeletons were all extended and supine. There were no prone or decapitated burials. The graves are orientated roughly north–south or east–west with the exception of skeleton F2049 whose grave is orientated southeast-northwest. These alignments would appear to be influenced by and/or respecting the ditches. 15 are orientated north-south, with the south of the grave being the preferred end for the head, and 13 orientated east-west, east being the preferred end for the head. Whether north-south or east–west the graves would appear to be aligned in respect to pre-existing features, namely ditches. It would appear that when there is a stratigraphic relationship between graves of differing orientations then the east–west ones *always* overlie those orientated north–south. It could be argued that the north-south burial was the earlier tradition. Interestingly, the shallow pit containing horse skulls is orientated north-south and Esmonde Cleary has recently suggested that animal remains might be focal in the development of human cemeteries (2000: 138), pointing to the eastern cemetery of London where the burial sequence is preceded by the deliberate (?ritual) burial of horses (Barber and Bowsher 200, 54).

It is possible that skeleton F2049, given its southeast-northwest orientation and its stratigraphic relationship with two north-south burials, F2025 and F2028 may be one of the earliest burials. The urned cremation dated to 180-230 AD from the vessel style lies approximately in the centre of the inhumation cemetery and it is tempting to see it

as the focal point for the later burial practice. A single urned cremation was discovered amongst the inhumations at Lynch Farm and Jones cautioned that given its relative shallowness of burial and the degree of truncation on that site that others could have been truncated and lost (1975, 100). The same could be said of the cremation at Vicar's Farm.

Northern Fields (Area E)

Western Side

Marking the abandonment of the G5 trackway is ditch F5599/F5580 (2.0-2.5m wide, 0.30-0.65m deep) which runs eastward from F5014 as the northernmost visible boundary (G29). Also running into the junction between F5014 and F5599 is ditch F5615 (0.75m wide, 0.23m deep). Close to the edge of this boundary lay an isolated burial, grave F2094.

Human Remains (N. Dodwell)

Originally identified in the evaluation, skeleton [2094] was buried in the far north of the site at the edge of a field boundary ditch (F5599). The individual was a middle/mature adult male and the position of nails around the body may infer burial in a coffin. The individual was buried with their head to the west.

Skeleton [2094]
A mid/mature adult male
The skeleton was well preserved, although fragmentary. The head was in the south west of the grave, the body was supine with right arm flexed, hand over pelvis and legs extended, feet together, left over right. Sub rectangular grave. Increased porosity and small areas of eburnation indicative of osteoarthritis were noted on the right distal humerus and proximal radius. Similar changes were recorded on both femoral heads and in both wrists. The surviving cervical vertebral bodies exhibited increased porosity and marginal osteophytes. The axis, the second cervical vertebra exhibits eburnation and a deformed articular surface with eburnation and deep grooves where bone has rubbed on bone. At least one tooth (the left 1st mandibular molar) was lost prior to death and two large carious lesions were recorded on a canine and premolar. The anterior teeth were worn right down to the dentine and slight to medium deposits of calculus were recorded on the surviving teeth. The superior parts of both petrous portions of the temporal bones have smooth lace-like perforations whose aetiology is uncertain.

Eastern Side

While the western side of this area would seem to remain fairly undeveloped, the eastern side of the area is re-cut (G15), re-affirming the western boundary of the earlier G16 enclosure but expanding southward up to the G8 trackway. This trackway is narrowed, its northern side now marked by gully F5671 (0.92m wide, 0.22m deep). The field itself is defined by ditches F5603 (0.6-0.75m wide, 0.2-0.4m deep, dated AD270+) and F5677 (0.6m wide, 0.08m deep), with an opening *c.* 11m wide on its western side. This is probably associated with the small enclosure F5679 (G17), which resembles the later G2.11 enclosure in the settlement core. This G17 enclosure ditch varied from 1.4-2.8m in width and 0.1-0.4m in depth (dated AD300+). A short section of gully projects from the northeast corner of this enclosure, F8137 (1.39m

wide, 0.3m deep, dated AD240/300+), and mirrors a similar gully projecting from the southern tip of F5603/F160 (1.4m wide). Also associated with this is ditch F5680 (0.7m wide, 0.35m deep, dated 240+).

In the mid-late 4th century, the western boundary of this field was re-cut, both closing off the western opening and the G8 trackway. Ditch F5013 (1.1-1.4m wide, 0.38-0.65m deep) ran all the way from the northern limit of excavation down to meet ditch F4934 (1.1m wide) where it formed the western boundary of a small sub-enclosure G31. This narrow, linear parcel of land (G31) which is defined by the ditch F5013 on its western side, lies between the G15 field to the north and the metalled surface (G32) to the south. The main bounding ditch of this area was F4759 (1.8-2.0m wide; dated AD300+), with a series of gullies dividing the area into narrow strips reminiscent of G16 to the north: F4782 (1.3m wide), F5726 (0.45m wide, 0.17m deep), F5729 (0.45m wide), F5728 (0.6m wide).

Chapter 7. Community and Economy

This final chapter examines broader themes of social and economic dynamics, and the relation of the settlement to the landscape and its position in the urban hinterland. The chapter is divided into two major themes: production which discusses crop and animal husbandry practiced on the site, and consumption which deals with foodways and trade/exchange.

Production

The economic basis of the settlement was mixed agricultural, principally cereal growing and livestock (mostly cattle and sheep). Of particular interest is the likelihood that cereal production was geared toward surplus rather than solely domestic consumption which has major implications for interpreting the site.

Crop Husbandry (R. Ballantyne)

Cereals and Other Economic Plants

The charred assemblage is dominated by cereal remains, which are primarily of wheat (*Triticum* sp.) with much lesser amounts of barley (*Hordeum vulgare* ***sensu lato***). In the majority of cases the wheat grains are comparable to the hulled types emmer and spelt (*T. diccocum/spelta*). The abundant cereal chaff comprises mainly spelt wheat glume bases, identified by their weak keeling and clear veination, and it seems likely that most of the charred wheat grain is also spelt. Occasional grains and chaff comparable to emmer have been identified in a small number of contexts, the cereal was probably a contaminant of the spelt wheat crop. A small number of rounded grains comparable to free-threshing wheat (*Triticum aestivum* ***sensu lato***), and hexaploid wheat rachis internodes (chaff) are present in two phase III contexts.

Barley is consistently but poorly represented (Figure 7.1). Of the forty-six grains recovered seventeen are hulled, and there is a ratio of 3:2 for twisted to straight grains. The hulled six-row barley type *Hordeum vulgare* ssp. *vulgare* therefore appears present, and this is supported by a number of six-row barley rachis internodes. A single rachis internode of rye (*Secale cereale*) in the late phase III ditch F5214 suggests some presence at Vicar's Farm.

It is unlikely that the proportions of charred cereal taxa are a true indication of their original importance. The majority of contexts are heavily dominated by spelt wheat chaff, and appear to represent a very specific crop processing by-product (see Chapter 6). The link between exposure to charring and glume wheat processing means that other *free-threshing* cereals such as barley could be under-represented. The low presence of barley grains and chaff probably denotes a contaminant within the deliberately charred wheat chaff; perhaps barley grew as a weed in fields where it had previously been cultivated. However the one grain-rich charred context (postpipe F5552) contains almost pure grain comparable to spelt wheat; so perhaps the dominance of spelt is a result both of its processing sequence and a central role in the site's economy.

The appearance of free-threshing wheat and rye in phase III, coupled with a slight increase in proportions of barley, suggests that some diversification may have occurred. Both are cereals that became widely cultivated in southern Britain during the Saxon period (Greig 1991). There is a marked lack of charred evidence for other economic plant types, with one Celtic bean (*Vicia faba*) in Iron Age pit F5359, and in the Roman contexts occasional larger pulses (>4mm) which could be peas (but lack identifying characteristics). That the assemblage is an artefact of the later stages of spelt wheat processing explains why other economic taxa have not been recovered.

Charred wild plants

A broad range of wild seeds is present, the majority of which represents species characteristic of arable or disturbed land, and probably derives from weeds of the cereal crop. The remains consist of grain-sized or small, free and heavy seeds that are far fewer in number than the cereal remains. These are seed forms which, like the glume bases, would usually be removed during the later stages of cereal processing (Hillman 1984; G. Jones 1984). The grain-sized seeds, particularly of grasses, are difficult to remove by sieve cleaning due to their similar morphology to grain. With the exception of a sample from a mid fill of a well [717] the wild taxa only represent seeds that survived the earlier crop processing sequence until their removal and charring with the main chaff (glume base) component. The range of wild taxa is therefore strongly tied to the charring context and is a skewed representation of the original weed flora; the proportions of each taxon represent the influence of seed form during processing (Table 7.1).

The most significant taxon both in frequency and number is stinking chamomile (*Anthemis cotula*). This plant indicates heavy, clayey soils, which corresponds well to the local conditions at Vicar's Farm. The other major wild plants represent several ecological groups, which provide information on the methods of cultivation. There are a number of large seeded grasses, including brome (*Bromus* spp.) and oats (*Avena* sp.). A lack of oat chaff within the assemblage has prevented the identification of wild or cultivated types, so the species is either a well-represented weed or moderately represented cereal. Stevens (1996) has suggested that high grass contaminants within a cereal crop may be linked to a rotation system, whereby grasses from the fallow period subsequently grew as weeds within the next arable crop. There is good evidence for the expansion of Roman arable onto previously uncultivated lands, including meadows, and this could also have increased the number of grass weeds (ibid).

Leguminous plants have an adaptive advantage as weeds in areas of low soil nutrients due to the ability of many to fix nitrogen. The consistent presence of clovers, vetches and wild peas at Vicar's Farm is therefore of importance. Stevens (1996) has linked the occurrence of numerous Fabaceae (Pea Family taxa) in Iron Age and Roman sites of the Upper Thames Valley to cultivation of seasonally flooded land and an increase in autumn sowing. The consistent, low numbers of sedges (*Carex* spp.) and spike-rush (*Eleocharis palustris*) within the assemblage at Vicar's Farm provides some support for this interpretation (Figure 7.2). These taxa are only capable of growing on arable land if there is a seasonally high water-table (ibid.; M. Jones 1984). The leguminous plants however exist in contrast to others of Chenopodiaceae, particularly orache

(*Atriplex patula/prostrata*), which have an advantage on nitrogen-rich soils. It is possible that they represent the manuring of fields.

Some perennial plants, particularly docks (*Rumex* spp.), are associated more closely with ruderal, rather than arable conditions. Their deep tap-roots and vegetative regeneration are heavily affected by modern ploughing. However ard tillage, which breaks the soil but does not turn it, allows many perennials to continue to grow. Perennial plant types are outnumbered by annuals at Vicar's Farm, but their continuous presence suggests that ard tillage was undertaken (Figure 7.3). Both true sedges and spike-rush have rhizome systems, and would also not be able to grow as an arable weed unless tillage occurred with an ard rather than a plough.

One exceptional context, mid-well fill [717] F5280, includes very high amounts of charred wild seeds (82% of its total count) with relatively low amounts of cereal remains. The context may represent debris from the fine sieve cleaning of a threshed and winnowed cereal crop, but prior to the removal of glume wheat chaff by parching and pounding. There is a very high number (c.800) of orache seeds (*Atriplex patula/prostrata*). Orache, like many Chenopodiaceae, produces exceptionally large numbers of seeds per plant (Hanf 1983), so the high numbers within this sample could represent only a few plants collected with the harvest. Many of the taxa represented within well [717] occur repeatedly within other sampled contexts, and include docks and pea types (listed in Lucas & Whittaker 2001). Some other taxa are high only within this context; knotweed (*Polygonum arviculare*), a cow-parsley type (Apiaceae indet.), ribwort plantain (*Plantago lanceolata*) and scentless mayweed (*Tripleurospermum inodorum*).

The Cultivation Regime

The wild seed assemblage clearly reflects cultivation upon clayey and occasionally wet soils, which could be expected in the local environment at Vicar's Farm. The continuous representation of one stage of crop processing[1] indicates that any fluctuations in wild taxa may thus represent changes in the arable conditions, rather than the actions of processing. When wild taxa at Vicar's Farm are broken down by site phase (Figure 7.4) changes in the weed assemblage correspond well to sequences in the Upper Thames Valley (Stevens 1996; M. Jones 1984).

M. Jones (1984) characterises the weed ecology of the Iron Age to Roman periods by four major shifts within the Upper Thames Valley:

- The gradual incorporation of new cereal crops - free-threshing wheats and rye
- Appearance of stinking mayweed as a weed during the 3rd/4th century AD
- A gradual reduction in legumes within weed floras during the Roman period
- An accompanying rise in nitrophile weed taxa

The assemblage at Vicar's Farm exhibits all these patterns to a degree, and demonstrates that the arable regime was influenced by wider changes underway within southern Britain. Limited evidence for crop diversification is provided by the rye and hexaploid free-threshing wheat chaff recovered from phase III contexts. As

[1] See Chapter 6.

illustrated by Figure 7.4 there is a marked jump in the representation of stinking chamomile between phases I and II at Vicar's Farm, which coincides with the 3rd century AD. The weed is characteristic of heavy clay soils, and its increase suggests that marked expansion onto heavier soils occurred across southern Britain at this time (Jones 1991).

The fall in legume types at Vicar's Farm is reflected by vetch/wild pea types (*Vicia/Lathyrus* spp.), although clovers (*Trifolium* spp.) are only slightly reduced, and medick (*Medicago* spp.) actually increases. Whilst the nitrophile orache (*Atriplex patula/prostrata*) decreases with time, other goosefoots (*Chenopodium* spp.) only appear during Phases II and III. Increased manuring of land, possibly associated with the shift onto heavier soils, may account for the trend in weeds affected by soil fertility.

Discussion

Many Roman sites in East Anglia are dominated by spelt wheat, and it appears to have been the major crop in the region (Murphy 1997). Unfortunately few comparable sites have been extensively sampled for charred plant remains. The fen-edge settlements of Maxey (Green 1985) and Stonea Grange (Van der Veen 1996) both exhibited poor preservation conditions, which severely limited subsequent interpretations. At both sites spelt wheat dominated, and emmer occurred in earlier Roman phases but quickly ceased to be cultivated. Breadwheat and barley were also present in low quantities, and the range of Roman cereal crops appears to have been fairly uniform across the southern Fen region. Very low quantities of flax (*Linum usitatissimum*) and lentil (*Lens culinaris*) were recovered at these two sites - evidence for which are lacking at Vicar's Farm. However, the assemblage here is specifically associated with cereal processing and under-represents all other economic plant remains.

At Stonea Grange there was also good evidence for the collection and use of wetland plants, particularly of sedges (*Cladium mariscus*, *Carex* spp.) and reeds (*Phragmites australis*). No evidence for such activities has been recovered at Vicar's Farm, where the very low quantities of wetland taxa are probably arable weeds. Stonea Grange also contained charred remains from a much broader range of settings (not just associated with cereal processing) and included fig seeds (*Ficus culinaris*), which must have been brought to the site. Vicar's Farm lacks any evidence for 'exotic' types, and it seems the site was primarily involved with the processing of cereal products.

The arable regime at Vicar's Farm reflects patterns identified from well-preserved Roman weed floras in the Upper Thames Valley (Stevens 1996, M. Jones 1994). Unfortunately no comparable sequences currently exist within the Fenland region. However the expansion onto clay soils, which may have previously been grassland, appears to have occurred broadly in southern Britain during the 3rd millennium AD.

Moreover the charred plant remains at Vicar's Farm are highly specific; they represent waste from the final stages of spelt wheat processing (see Chapter 6). The information provided by this assemblage is therefore limited to aspects of cereal husbandry and processing. Within the main enclosure the de-husking of stored wheat was undertaken on a repeated basis. The crop was of local origin, as indicated by the weed ecology,

and had grown up heavy clay soils that in places were damp. Despite the good evidence for processing and nearby storage, other aspects of crop processing are under-represented or absent.

Neither charred remains of threshing and winnowing waste (particularly straw) have been found, nor physical evidence for threshing floors recovered. These pre-storage activities may have been undertaken outside the excavated area or away from the site completely. At Maxey (Green 1985) there was a similar absence of earlier crop processing stages. The absence may in part be processual, since winnowing by-products are far more susceptible to destruction by charring (Boardman & Jones 1991) if they are exposed to charring at all. However recent charred remains at Earith (Regan forthcoming) do include rich charred winnowing by-products, so the complete absence of such waste at Vicar's Farm may partially be due to a lack of such activities 'on-site'.

Charred grain-rich contexts, possibly denoting debris from ovens or hearths where grain may have been accidentally charred are also absent. The only such context recovered is post-pipe F5552. Other 'food-preparation' charred debris may have been cleared onto middens, or omitted from the sampling programme (although the latter is unlikely). There is clear disparity between the very good evidence for grain storage, dehusking (charred remains) and milling (quernstones) at Vicar's Farm, and the absence of actual food-preparation debris. The identification of 'consumer' and 'producer' sites is archaeologically difficult, and potentially oversimplifying (Van der Veen 1991; 1996). However at Vicar's Farm there is far more evidence for grain storage and flour production than there is for actual consumption. It could be suggested that the site was a locus for the storage and processing of locally grown cereals, particularly spelt wheat, of which the surplus was transported elsewhere as flour. The proximity of Vicar's Farm to the fort and settlement at Cambridge may have influenced activity at the site, and encouraged production of a tradable surplus.

Animal Husbandry (A Clarke)

Cattle

The remains of cattle dominate the Roman assemblage, almost to the exclusion of the other domestic species and would appear to be the mainstay of the site economy. Unfortunately, the form of this economy is somewhat elusive as the levels of cattle bone recovered are fairly low until phase III. The cattle remains recovered in the phases preceding phase III provide only tentative clues as to the form of cattle exploitation practiced, however the evidence that has been recovered does point to a cattle economy established in the first phase of the occupation and maintained throughout the life of the site. Tables 7.2 and 7.3 (also figure 7.5) show the data recovered relating to age at death estimations from bone fusion and dental wear. During Phase I it would seem that a small number of animals die within their first year; while the rest are left until they have reached prime age before being slaughtered. With this indication of beef production established early on, the pattern is continued and extended by the final phases of the occupation. The data from the final phase show that the husbandry was geared towards beef production. However, there is also evidence of fully adult and old age cattle. This would suggest that by the time the final phases of the site are reached, cattle are being bred for traction as well as meat.

In addition to the ageing data pointing to a tradition of beef production at Vicar's Farm, there is also a limited amount of evidence that suggests a surplus of meat was being produced. Of all the skeletal elements recovered displaying signs of butchery, scapulae are the most common and they display evidence of being butchered in a particular way. Some of the glenoid cavities show chop marks, as do several of the spinae. In addition to this some of the blades of the scapulae show repeated nick marks. Together, these marks indicate that beef was being preserved on the bone, possibly by brining (glenoid and spine trimmed to allow the salt to permeate to the meat next to the bone) or by smoking. The nick marks on the blade of the bone are the possible result of the last pieces of persevered meat being shaved off. It has been suggested that such bone waste is a strong indication of the presence on site of a professional (i.e. the butcher) who specialised in the production and sale of preserved meat raising the possibility of a pre-BSE trade in beef off the bone (Dobney 2001). This may well have been the case at Vicar's Farm but it could equally refer to a preferred manner of beef consumption on site and certainly need not indicate surplus production.

Sheep

The second most prevalent species, sheep occurs in all phases of the site, but in much less numbers than do the remains of cattle. This however, may be the result of a taphonomic bias due to carnivore gnawing destroying more of the less robust sheep remains. The anatomical representation shows that in each period of occupation most bones of the skeleton are represented, but there is a definite prevalence of the more robust elements. Assuming however that the economy of the site did centre on cattle production, what then was the economic function of sheep? As with the ageing data retrieved for cattle, the age at death estimation for sheep is very limited and mostly comes from phase III of the site, but once again there are hints of a breeding program that was established at the beginning of the site and continued throughout the occupation.

Tables 7.4 and 7.5 (and Figure 7.6) show that in phase I lambs are allowed to mature a little before being slaughtered in their second or third years with a very few allowed to reached full adulthood and beyond. Although this statement is based on only a small amount of ageing data and cannot be taken as read, it is re-enforced by the data from the later phases of the site. In phase II most of the animals aged do not survive beyond their first year and the rest are again slaughtered in their second or third years. By the final phase of the site there is more data and a much clearer pattern emerges. It is the same one as hinted at in phase I. Most of the sheep are killed in their second or third years while a smaller amount are allowed to live to full maturity. The pattern that emerges from the sheep ageing data is one of a mixed economy producing meat and wool. Some sheep did not survive their first year, either due to early slaughter or not making it through their first winter. The remaining lambs are either killed when their meat is at its best (second or third years) or they are allowed to mature to an age when where they can maintain the flock size and produce a good quality fleece.

Pigs

If the total number of specimens (NISP) recovered per species were viewed in isolation, it would seem that pigs are the most common species on the site. This, however is a bias caused by one large deposit. Over one thousand foetal pig bones were recovered from a single context ([1749] F5499), accounting for at least 10 individual piglets. All appeared to be articulated and showed no signs of being butchered. The piglets were recovered from a terminal ditch in the main enclosure of Area A. What this deposit does show is that pigs were being bred, at least to a limited extent, on site. Also the high level of preservation of these probable still-borns indicates that these piglets were buried quite rapidly as, considering the high percentage of gnawed bone recorded, such small, fragile bones would surely not have survived the attentions of dogs and other scavengers.

The group of piglets from Area A provides evidence of pig husbandry being practiced on the site in phase II. Unfortunately, the small number of pig bones recovered from each subsequent occupation phase have very little to offer in the way of interpretative data. A limited number of age at death estimates were recorded in phase III, which point to the majority of animals being killed while still juvenile and only a small number being allowed to reach maturity (Table 7.6). Despite the limited amount of pig remains, the presence of foetal bones and the pattern displayed by the ageing data, combined with fact that pigs do not provide any secondary products, can only point to the conclusion that pigs were being bred and consumed on a limited scale for their meat.

Goats

The remains of goats on the site were even more scarce that those of pigs coming from the later phases of the occupation and amounting to only 7 fragments. This low level of recovery can do little more than confirm the presence goat on site in phases II and III.

Horses

The remains of horse that were present on the site originate from all phases of occupation and in all areas in the site. Once again it is phase III that produced the most amount of data. Horses was certainly eaten as well as used for traction/riding. Evidence for the former comes from cuts marks indicative of dismemberment (F5321) and for the latter from a case of pathology where a first and second phalange are fused together (F5470). Such a case could be promoted by excessive stress (i.e. work) causing the formation of extra bone leading to the fusion of these two bones. Apart from the obvious use of being ridden, it is also possible that this animal was used for traction or as a beast of burden. In phase II there is further evidence the butchery of horses from a skull (F5274) and a pelvis (F5479) showing cut marks indicative of the primary and secondary butchery of a carcass. In the final phase of the site there are still the tell-tale signs of butchery indicating that horses were being consumed.

Dogs

Considering the high level of gnawed bone recorded on the site it is not surprising then that the remains of dogs are present throughout the occupation of the site. The skeletal elements recovered come from throughout the skeleton and there does not appear to be any method in their place of deposition. It is an accepted fact that the Romans were responsible for the introduction of different breeds to Britain (Harcourt, 1974). This is reflected in the elements recovered; especially the limb bones that show marked differences in size indicating the presence of different breeds on site. No doubt each breed served a different purpose, such as guarding livestock or hunting in accordance with the documentary evidence of the set ideas Romans had on which breed of dog should be used for which task (Clutton-Brock 1987).

Deer

The remains of deer recovered are limited but occur in every phase of the site. The majority of the remains consist of shed, fragmented antlers, some of which show evidence of their being used as a raw material (see Figures 6.12: 3 and 6.23: 3). A small number of bones were recovered which were identified as Red deer (1 metapodial and 2 radii) and Roe deer (1 mandible and 1 tibia). It is very difficult to glean very much interpretative data from this small collection of remains. But the fact that there are very few deer bones on site, combined with the cut marks seen on the antler and on one of Red deer radii, does suggest that antler was imported onto the site as a raw material, along with the occasional joints of venison.

Other Mammals

The remaining mammal species recovered take the form of isolated and fragmentary bones from cat, badger and fox, all recovered from the final phase of the site. Apart from the cat that is no doubt domestic, the other mammals found are not considered to be anthropogenic in origin.

Birds

The bird bone recovered from the site is in very good condition, therefore it is somewhat surprising that the number of bones recovered is so low. It may be that bird species had very little contribution to make to the overall economy of the site; but considering the high level of gnawing recorded (see Table 2.7) and the fragility of bird bone, a more likely explanation of one of a taphonomic bias. The most common bird species on the site was, unsurprisingly the domestic chicken. During phase I two of the cremations (F5305 and F5307) in the cemetery also included chicken bones. Only a single chicken bone was recovered from phase II, but by the time of phase III this figure rises to 86 bones, almost all of which originate from a single deposit, a pit (F5656) that contained the remains of at least two individuals. The elements recovered were not articulated and the majority are those that hold the most meat on a jointed up carcass; as such this deposit is viewed, as are the other chicken remains, as probable meal waste. The final phase of the site also produced a small number of isolated bones belonging to goose, a duck species (probably mallard) and rook. The former two are most likely the remains of animals kept and consumed on the site, while the later is not seen as anthropogenic.

Discussion

From the evidence presented above it is clear that the analysis of the Vicar's Farm assemblage has revealed a sizeable amount of interpretative data relating to the socio-economic patterns contained within the faunal remains recovered from the site. There is unambiguous evidence relating to an organised system of husbandry that is centred around cattle and to a lesser extent sheep and possibly pigs. Further to this the assemblage has also provided good evidence that indicates an organisation of activities the reach beyond the daily, domestic routine.

The generally accepted view of the dietary preferences of the average Roman, at least where meat was concerned, pork was the most popular choice. However the excavation of most sites dating to the Romano-British period appear to disagree with this accepted view (Dobney 2001). In her review of ten Iron Age and Romano-British sites located on the Welsh borders and in Yorkshire, Noddle (1984) demonstrates that cattle and sheep were the most prevalent species, with cattle gradually becoming more and more popular through time. This preference for cattle repeats itself in the south east of Roman Britain on sites in the same geographical region of Vicar's Farm. A prime example is that of the Romano-British farmstead of Orton Hall Farm (Mackreth 1996). The excavation of this site produced an animal bone assemblage of similar size and range to Vicar's Farm (Table 7.7). The major domestics dominated along with horse, dog and cat, together with a few wild species. The analysis carried out on this assemblage revealed that the economy of the site was mainly dependant on cattle and sheep, exploiting them for their secondary products as well as their meat. Sheep were kept for wool and a limited amount of meat. But it was cattle that made the major dietary contribution throughout the life of the site, with stock being bred, reared, slaughtered and consumed on site. Pigs, it would seem made little contribution to the site economy.

This pattern (or indications of it, depending on the size of the excavation) is seen in sites from all over the eastern region of Roman Britain at sites such as Spong Hill (Rickett, 1995), Chignall Roman Villa (Clarke, 1998) and New Hall (Evans, 1996). Of these sites it is the latter that gives some indication as to the function of the domestic activities revealed at Vicar's Farm. The site of New Hall is located at the western gate of Roman Cambridge and has settlement dating from the Bronze Age to the Romano-British Period. The analysis of the faunal remains recovered from the Romano-British phase of the site revealed an assemblage that was dominated, in order of prevalence, by cattle, sheep and then pig. Interestingly though New Hall stands out from the sites mentioned above and from Vicar's Farm as it was interpreted as having a non-subsistence economy, i.e. the occupants of the site obtained their meat from an external source. The results of the Vicar's Farm analysis show that there was an organised system of husbandry with cattle being bred for their meat, sheep for meat and wool, together with an indication of small-scale pork production. Added to the data on the husbandry practices, the anatomical representation seen at Vicar's Farm for the three major domestics shows that these animals were being bred, butchered and consumed on site. However, there are indications that the site economy extended beyond self-sufficiency. The remains of pig are very low and are limited to either very young or mature animals. The pig remains at New Hall are restricted to individuals of immature age which had been brought to site for slaughter. Considering their

geographical location, it is not unreasonable to suggest the New Hall was supplied with pigs of prime age from Vicar's Farm.

This argument is supported by further evidence from the cattle remains. It has been mentioned above that articulated cattle limbs were recovered displaying cut marks indicative of the filleting of meat. Added to this there is also evidence of the preservation of beef on the bone, a practice that could suggest a surplus of meat on site. It is possible that these fillets and preserved cuts of meat were being exported off site. However, there is no sense in which the faunal assemblage at Vicar's Farm displays a classic 'producer pattern', dominated by waste bones; although both sale of meat 'on the hoof' or meat off the bone would betray this 'classic' pattern. It should also be noted that there is very little evidence of hide production or horn working in the assemblage of Vicar's Farm. There is however extensive evidence of the exploitation of secondary products at New Hall.

From the evidence presented above a possible picture of life in Roman Cambridge is formed. The inhabitants of Vicar's Farm produced and consumed as much meat as they needed while the rest, either fresh or preserved was sold or exchanged on site to the inhabitants of contemporary communities which no doubt included the site of New Hall. It is clear then that the domestic side of life at Vicar's Farm was highly organised and adhered to the Romano-British norm of a cattle based economy. From the evidence presented above it is clear that Vicar's Farm was not simply a small isolated, self-sufficient farmstead. There was an organised system of animal husbandry that not only provided enough food for the site but also produced a surplus of meat and as such it was a centre for trade and exchange of animal goods with contemporaries in Roman Cambridge and perhaps beyond.

Consumption

Foodways

The Pottery (with G. Monteil)

For a large part, using pottery is fairly unproblematic – there are no kilns on the site so we can be sure that most pottery vessels, if not accompanying burials or ritual deposits, were used and broken in the course of culinary activities. There is some evidence of re-use of pottery vessels, such as for gaming counters or spindle whorls, and the most interesting is perhaps the re-use of (the bases?) of large storage jars as ovens – several sherds from storage jars show interior sooting, suggesting they may have been used like 'tandoori's', i.e. small clay ovens. At sites such as Elms Farm and Chelmsford, such vessels have been found set in the ground (Atkinson & Preston 1998: 107). The typical and full repertoire of pottery vessels is present on the site, and all stages of culinary practice are clearly represented – storage, food preparation and service, and drinking (see figures 7.7-7.11). Table 7.8 and Figure 7.12 show the vessel forms broken down by phase – only the cremation vessels have been excluded as they bias the statistics (which are based on EVE's). The first thing to note is that there is an obvious and dramatic increase in vessel usage over time – the quantities more or less *doubles* between phase I and II, and then *doubles again* between phase II and III (calibrating the quantity against duration, as each phase occupies slightly different

time spans). This change could be due to any number of reasons – it may reflect population increase, or it may simply reflect changes in culinary practice.

The site does expand quite substantially over time, especially in phase III – the amount of labour involved simply in digging the ditches might suggest an increased population, but more generally, there is more of everything – finds, features and space. This does suggest that the population - resident or visiting the site – does increase over time. However, this does not preclude that possibility that culinary practices also underwent a change. Certainly there are some changes to the assemblage composition over time which suggest this; flagons and cups for example exhibit a major drop between phase I and II as a proportion of the overall assemblage, suggesting there was a significant change in drinking habits by the end of the 2nd /early 3rd century. Beakers show an inverse rise (chiefly in phase II), but they never occur in substantial numbers. Jars decrease slightly, and this is probably related to the rise over time in dishes and bowls which more or less triple as a proportion of the assemblage in phase II and III, compared to phase I, while mortaria also exhibit a steady rise over time. This suggests that changes in drinking practices may have been linked to other changes in food practices – in other words, the culinary field was being transformed in some manner.

Can we qualify this further? Attributing function to vessels is not always easy – even forgetting the problems inherent in re-use, many vessels could be used for different things. Jars can be for cooking or storage, while bowls and dishes for serving or cooking. Certain forms on the other hand are more specific – flagons, cups, beakers, storage jars, mortaria and amphorae, can all be generally associated with certain activities. Storage jars do not exhibit much variation over time as a proportion of the assemblage, but as we have already pointed out, mortaria rise, while flagons and cups decline. This in general might suggest food preparation is becoming a more important part of culinary practices on site, while formal drinking declines in importance. This can be independently tested by looking at the proportion of vessels used in cooking; here we cannot rely on form (see above), but instead use the presence of sooting on the pot to indicate whether the vessel has been used for cooking. When we do this, we see that the number of vessels as a proportion of the whole assemblage with sooting residues does increase at a steady rate over time (Table 7.9); moreover while only jars have sooting residues recorded on them in phase I and II, in phase III bowls, and especially dishes, also appear to have been used in cooking. This suggests not only changes in the importance of food preparation, but also in the *way* it was done.

It is hard to say whether this decline in formal drinking might be part of a wider decline of formal dining for example; one cannot assume that the lack of cooking residues on vessels such as bowls and dishes for example is indicative of a service use, nor can one rely on fabric. Finewares do increase over time, but this is a regional (if not national) phenomenon and the term 'fineware' is not synonymous with service or tablewares since many of the forms are identical whether in colour-coated or greyware, and colour-coated vessels also show signs of use as cooking. Although the level of residuality and intrusiveness seems quite high throughout the phases, the level of finewares overtime seems quite typical of the region (Perrin 1996: 177; Ellis *et al.* 1998: 78-79) as it increases regularly to reach figures over 25% in the 3rd and 4th centuries. The dominance of Nene Valley colour-coated products (35% of the finewares) is again typical of the region when the industry floods the local market in

the 3rd and 4th centuries with a range of forms previously produced in coarseware (*ibid* and Evans 2001, 30-31; also see below). These late forms might therefore not belong to the category of tableware but might have assumed a more cooking-orientated purpose (several examples were found with burnt external surfaces, especially flanged and plain-rimmed 'dog' dishes).

If the patterns do suggest a decline in formal dining and a more 'kitchen' oriented practice of drinking and eating, this could imply many different things, such as a change in the composition and/or status of the population, or a change in cultural attitudes to eating and drinking. A similar change in the patterns of eating and drinking over time in terms of public and private spheres has been argued for Barton Court Farm, Oxfordshire (Meadows 1997). Such changes may also be reflected in different attitudes and values pertaining to ceramic vessels and this is most clearly seen in the choice of grave goods. The early cremations for example are frequently interred with accompanying ceramics - while the cremated bone itself is often placed within a jar, there are accessory vessels in five out of the nine cremations from Vicar's Farm, and in all five, these are flagons, and in one case also a beaker and dish. Compared with the inhumation cemetery where there are only three instances of accompanying ceramics as grave goods out of a total of 29/30 burials, this suggests quite a change in attitudes to ceramics: minimally in terms of their preference as offerings in graves, but with possibly wider connotations about the general value of such objects in the community. Certainly the preference for drinking and service wares as grave goods is significant in the light of this decline in the use of such vessels in later phases, both across the site as a whole and as grave goods.

The Glass Vessels from non-burial contexts (H. Cool)

Two fragments of vessel glass were found in phase II contexts, neither of which can be closely identified as to form. One (***a***) comes from a colourless wheel-cut beaker, the broad range of which were in use from the later 1st century to the mid 2nd century, and were commonest in the 2nd century (Cool and Price 1995: 79). The neck fragment (***b***) may be dated to the 1st to 3rd century because of its colour.

a) Beaker. Colourless. Body fragment, straight side curving out to (missing) rim. Horizontal wheel-cut groove on upper body. Dimensions 26 x 16mm.m wall thickness 1mm. (F5280; <4333>).

b) Jug or flask. Blue/green. Cylindrical neck fragment. Length 22mm. (F5483; <1643>).

The vessel glass from the phase III contexts divides into two categories. The first is clearly residual as it consists of fragments of square and prismatic bottles (***c-e***) the later 1st to early to mid 3rd centuries (Isings Form 51; Price and Cottam 1998: 194-200). The second category may be dated to the 4th century. The only form that can be identified with anything approaching certainty is ***e*** which came from the range of cylindrical bottles and flasks that were in use at the time (see for example Price and Cottam 1998: 184, 204-7). The vessels the body fragments ***g-i*** came from are most likely to have been drinking vessels judged by their thinness.

The counter ***j*** is also a 4th century form and there is some evidence that this may have been a later 4th century development (Cool 2000: 52). The marvered spots of colour surrounding the central red spot were probably originally blue (see for example

Clarke 1979, pl. Ib). These counters appear to be commonest within Britain, though they are occasionally found on continental sites (Cool and Price 1987: 123-4), and there is the distinct possibility they could have been a Romano-British development.

c) Square bottle. Blue/green. Base fragment, base design - at least two concentric circular mouldings. Dimensions 35 x 30mm. Bottle width c. 80mm., diameter of outer moulding 60mm. (F649; <4336>). Phase III (Figure 7.13: 1)
d) Prismatic bottle. Blue/green body fragment. (F5353; <950>). Phase III
e) Prismatic bottle. Blue/green body fragment. (F5428; <1080>). Phase III
f) Cylindrical bottle or flask. Pale greenish colourless; many small bubbles. Lower body and base fragment; vertical side with slight concavity above flat base. Base diameter 75mm., present height 20mm., wall thickness 3mm. (F5289; <4337>). Phase III (Figure 7.13: 3)
g) Body fragment. Yellow/green; small bubbles. (F5427; <4338>). Phase II-III.
h) Body fragment. Greenish colourless bubbly. (F5006; <4335>). Phase III.
i) Body fragment. Pale green; many small bubbles. (F5414; <4011>). Phase III.
j) Counter. Very dark glass appearing black. Plano-convex with potted base. Three large circular heavily decayed dots of ? white opaque glass with central oval opaque red dot. Diameter 18 x 16.5mm., thickness 5mm. (F5603; <4329>). Phase III (Figure 7.13: 4).

Of the two unphased fragments of glass only *l* needs special comment as it is good evidence that occupation at the site continued into the later 4th century. Beakers with fire rounded rims like this are a mid 4th to early 5th century form (Price and Cottam 1998: 129). The other fragment (*k*) is another example of a prismatic bottle of the later 1st to early 3rd century.

k) Prismatic bottle. Blue/green. Base fragment. Base design - at least one circular moulding. Dimensions 33 x 14mm. (F5033; <4070>).
l) Beaker. Light green; many small bubbles. Rim fragment, rim bent out, edge fire rounded; slightly convex-curved body sloping in. Rim diameter 65mm, present height 20mm., wall thickness 0.5mm. (F4178; <4341>). Surface find. (Figure 7.13: 2).

Food Remains (with A. Clarke)

Actual food remains are a little problematic to study given the discussion on Production above; in terms of by-products of food preparation, while both cereals and meat were consumed on the site, certainly cereals and possibly meat were also produced for an external market, and distinguishing butchery or crop processing for on-site consumption as against export is probably impossible, if not even pointless – as there may not have been a distinction. In terms of actual food remains (i.e. as opposed to waste by-products), of the cereals, hardly any actual grains survive (most were probably milled to flour), while with faunal remains, we cannot even assume that bones from meat-bearing elements were consumed on site, as the meat may have been exported off the bone (see Clarke above). Nevertheless, it is still worthwhile commenting on the evidence for butchery and consumption of animal carcasses, especially as the export of meat is only ambiguous.

The evidence of butchery is low considering the size of the assemblage. The majority of butchery evidence takes the form of chop-marks or breaks resulting from the initial dismembering of a carcass into joints of meat. Much less common are those cut marks indicative of the filleting of meat from the bone. During this activity cutting into the bone is unnecessary and results in wasted energy; so it is possible that the low number of observed cut marks are due to the presence of an experienced butcher on site.

Those bones that do display cuts marks, such as several horse and cow scapulae, provide evidence for the preservation of meat on the bone. There is also some very limited evidence of secondary exploitation of animal products from chop marks on several horn-cores and the removal of the hide from a horse carcass.

All the main domesticates exhibit butchery marks – cow, sheep, goat and pig, but also horse and deer – and they were all probably eaten. Of these, all except deer were probably reared and butchered on site as whole carcasses as a wide range elements are represented (Table 7.10). Deer occurred in very small quantities, and probably came in as joints of venison – there is no indication of whole carcasses, and apart from antler, deer is only represented by two radii, a tibia and a metapodial, as well as fragments from a mandible and skull. Summarising this data in terms of meat-bearing and non meat-bearing bones, it shows that they are more or less in equal ratio for all species and that this remains more or less stable over time (Table 7.11). There is a slight tendency for cow and sheep/goat numbers to reduce while horse increases, but whether this is statistically significant is debatable. Certainly the rise in horse is probably due to the several ritual deposits of articulated joints in phase III. In other words, the butchery of whole carcasses of main domesticates occurs throughout the whole period of the site. The only other main animal species likely to have been consumed for their meat consist of domestic and other fowl – mainly chicken, but also geese and duck.

For all phases, the pattern of animal exploitation seems more or less consistent – cattle dominate, followed by sheep and then horse, with pig, goat and fowl forming smaller proportions of the diet (Table 7.12). Wild species are mainly represented by deer, although a few smaller wild animal bones occurred in the assemblage: fox (tibia, femur), badger (humerus, tibia), rook (ulna), pheasant (ulna, metatarsal) and possibly pigeon (femur, tibia and coracoid). Being mostly leg and meat-bearing bones, it is possible they represent the remains of food, but this must have been very occasional as altogether they only account for 11 bones. Such wild species show no particular distribution or association with for example, ritual structures. As discussed above, this pattern is fairly typical compared to other sites (see Table 7.7), save the higher numbers of horse at Vicar's Farm. New Hall they were fairly numerous too, but at Orton Hall farm, they comprised only *c.* 3% of all domesticates. Generally high cattle and pig are good indicators of the degree of Romanization on a site, as are oysters and chickens (King 1978; 1991); apart from the pig, which does not seem very common here, or on other comparable sites in the region, this patterns seems to hold.

The percentage levels of burnt bone within the assemblage are mostly quite low and originate from isolated bones that display slight levels of charring, possibly as the result of cooking (i.e. roasting). Most of the bones exhibiting signs of burning come from the core areas (A and B), perhaps unsurprisingly (see Table 2.7). The general lack of charring on bones might be taken to imply that meat was predominantly eaten either as cured/smoked cuts or was boiled/stewed. There is good evidence that much of the meat was indeed eaten in a cured/smoked form, but also the presence of jars used as cooking vessels (see above) might also suggest stewing. Moreover the predominance of deep dishes and bowls throughout all periods (as opposed to shallow platters), many of which would have been used to eat from, might suggest a 'wetter' dish than a dry one.

Apart from the bone, the other major category of food remains on site are oyster shells. These are fairly ubiquitous and fortunately, survived quite well despite the sandy and clay soils. Oyster shell are significant moreover, in that, unlike bone, they were brought to site specifically for on-site consumption. Their presence and distribution therefore should reflect this, and this makes them in some ways more useful than animal bone to study food refuse patterns. Oyster shell was found across the core part of the site, diminishing in quantities the further away from the core (Figure 7.14). It confirms, as do the distributions of pottery and bone (see Chapter 2), that refuse did not move far from its source, i.e. the core of the settlement. Moreover, there is a definite sense of the shell occurring in higher quantities toward the back/western side of the core, especially toward the southwest in the G24 enclosure (Area B). This is an area which belongs to a late phase of the site (II-III), and indeed, the amounts of shell increase quite dramatically over time, doubling between phase I and II, and more than quadrupling between phase II and III (Table 7.13). The interesting thing about this trend is that exactly the same ratios of increase were noted for the pottery, which might suggest that the main drive behind this increase is a larger population – resident or visiting.

Although oysters seem to have formed a common enough part of the diet, fish are very rare. No fish bones were retrieved during bulk collection and although sieving was not carried out, it is surprising none at all occurred. In the environmental samples, only two produced fish bone, which if extrapolated as a percentage, suggests fish bone occurred in <0.5% of all contexts. One of these samples came from the stomach area of skeleton F2016 in the inhumation cemetery, which suggests the people did have access to fish, but it was probably very rare. The only other foodstuff are eggs – eggshells again were retrieved from environmental samples, and slightly more common, in 25% of samples, suggesting eggs were a major part of the diet, which is unsurprising since chicken and other fowl were bred and eaten.

The over-riding pattern of food waste would seem to concentrate in the core part of the site and particularly the eastern side of the core. Based on calibrated transects through the site (see Chapter 2), this distribution is probably real, and would seem to reflect refuse patterns lying close to and around the main structures.

Exchange and the monetary economy

It has already been argued that the settlement was involved in surplus grain/flour production for export, and possibly meat too; on the other side of the economic exchange are imports. In particular, the range of material culture on the site – e.g. pottery, glassware, metalwork, quernstones – was all imported through trade networks, none of it was made on site. The exception may be certain iron objects as smithing is clearly evident, though whether this is repair or actual production remains open. An examination of the range and sources of some of these imports to the site will in the first instance, give an indication of the place of the settlement in regional trade networks and the use of money. Later, more general conclusions regarding the wealth and status of the community will be drawn.

Ceramics and Source (with G. Monteil)

The range of pottery wares on the site is fairly typical for the region and is dominated by local coarsewares, with a substantial quantity of regional finewares and a lesser amount of continental fabrics. The range of fabrics are described below (with their ascribed codes), followed by a more general discussion on the ratio of wares against other sites in the region. Full fabric cross-references and descriptions are not given in most cases as these can be found in standard texts, chiefly Tomber and Dore (1998) and Tyers (1996). Quantitative summaries are given in Tables 7.14 and 7.15.

Continental Imports

The principal foreign imported fineware is samian ware. The three main production sites are present but with a net domination of the Central Gaulish kilns (68% of total samian), East Gaulish products accounting for 18% and South Gaulish examples for 9%. Other types of import from Central Gaul consist of colour-coated beakers and a green glazed beaker (in [4878]). One fragment of Dressel 20 traditionally associated with the importation of olive oil from the Baetican province and several sherds of a powdery pink fabric of possible Gaulish origin were the only amphorae found on site. The last import found on Vicar's Farm consists of a folded black colour-coated beaker from Trier dated 180-250 AD.

Terra Nigra (TN)

A platter in a hard burnished smooth deep grey fabric, was found in context [3013]. It is typologically close to Rigby 1973, n.27 p 14 but presents a 'kinked wall' (Symonds and Wade 1999 n.46, 214).

Samian (SM)

The principal imported fineware is samian ware. The three main production sites are present but with a net domination of the Central Gaulish kilns (CGSM, 68% of total samian), East Gaulish products (EGSM) accounting for 18% and South Gaulish examples (SGSM) for 9%. The range of forms is quite poor and consists mainly of plain forms: the dishes Dragendorff 18, 18/31, 31, 31R, Dragendorff 36, Ludowici Tg and Walters 79, the cups Dragendorff 27, 33 and Dragendorff 35, the mortarium Dragendorff 45 with a lion spouthead and one possible Dragendorff 38. Six sherds of decorated Dragendorff 37 have been recovered. The early dish Dragendorff 18 seems to be of Central Gaulish origin and has an illegible and incomplete stamp (Bet and Delor 2000, 470, see n.58A for the form that is always stamped). Two stamped Central Gaulish Dragendorff 31 were found: one stamp is incomplete and reads INI....SM in [1759], the other one is also incomplete and reads ...EP...[4111]. One Dragendorff 18/31 from a possible Martres de Veyre origin is also stamped, it reads ΛΛΛΛ ([4697]).

Central-Gaulish colour-coated (CGCC)

Other types of import from Central Gaul consist of colour-coated beakers. The code CG1 CC refers to the white fabric and was found in [1762] associated with a roughcast decorated beaker, while CG2 CC refers to the soft micaceous buff fabric (Tyers 1996, 139-40). and a green glazed beaker (in [4878]).

Moselkeramik (TRCC)

The last import found on Vicar's Farm consists of a folded black colour-coated beaker from Trier dated 180-250 AD with the distinctive 'sandwich' core of red with grey margins ([775]) (Tyers 1996, 138).

Amphorae

One fragment of Dressel 20 traditionally associated with the importation of olive oil from the Baetican province (BAET) and several sherds of a powdery pink fabric of possible Gaulish origin (GAUL) were the only amphorae found on site.

Regional Imports (further than 30 km from the site)

The quantitatively dominant fineware is Nene Valley colour-coated ware (NVCC). The other sizeable fineware group comes from Hadham (Herts). The oxidised version (HADRE) dominates but occasional fragments of Hadham Grey Ware have been recorded (HADGR). Several sherds of Hadham burnished reduced ware (Tomber and Dore 1998, 153: HAD RE 2 "the fabric is grey, often brownish or red brown") have also been identified. The third main type of Romano-British wares comes from Oxfordshire region and consists of oxidised fine wares and white ware (OXRE & OXWW). Colchester colour-coated products are also present within the assemblage (COLCC). Another distinctive group is the shell-tempered ware (SMSW). This type of coarseware, in an oxidised hard fabric, often presents burnt external surfaces, which suggests a cooking purpose. This coarseware probably comes from Harrold in Bedfordshire.

Nene Valley (NV)

Most of the colour-coated products (NVCC) from the Nene Valley display the characteristic hard white to orange yellow fabric with occasional red to brown examples, which might come from Stanground (Perrin and Webster 1990, Dannell, Hartley, Wild and Perrin, 1993, Howe, Perrin and Mackreth, 1980). Typologically quite poor, the range of Nene Valley colour-coated forms is dominated by plain rimmed dishes, flanged bowls and jars with however few distinctive vessels: a late bowl form with a cordoned neck (330-400AD) in [1238], a jug (Dannell, Hartley, Wild and Perrin, 1993: n.196 fig.62), a pentice moulded beaker in [1542] (*ibid*, n.176) and an indented rouletted beaker in [1682]. Very few examples of grey ware (NVGR) were found in the assemblage, they all display the white to buff/grey fabric with a grey slip. The most recognisable forms are a beaded rim dish dated 160-200 AD ([1684]), a beaker with underslip barbotine dots line decoration in [1703] and a plain rimmed dish in [1708]. Apart from mortaria (see below), Nene Valley White Ware (NVWW) jars and flagons are present within the assemblage, all the sherds have a fabric similar to the colour-coated examples but self-coloured. They are all abraded.

Much Hadham (HAD)

The other sizeable fineware group comes from Hadham (Herts). The oxidised version (HADRE) dominates but occasional fragments of Hadham Grey Ware have been recorded (HADGR) (Tyers 1996, 168). Several sherds of Hadham burnished reduced ware (Tomber and Dore 1998, 153: HAD RE 2 "the fabric is grey, often brownish or red brown") have also been identified.

Oxfordshire (OX)

The third main type of Romano-British wares comes from Oxfordshire region and consists of oxidised fine wares (OXRE) and white ware (OXWW). This production centre has been discussed at length by Young (1977). The Young types C81 and C83 (1977: Fig.64) with demi-rosette decorations were amongst the most recognisable forms.

Colchester (COL)

Colchester colour-coated products (COLCC) are present in small quantity within the assemblage. The fabric was identified using the description furnished by Tyers (1996, 167). The forms associated with this fabric were a beaker with rouletted lines and overslip scroll barbotine decoration ([1928 upper fill]) dated 220-260 AD, a bag-shaped beaker dated 130-170 AD in [618], a folded beaker in [469], a beaker

with overslip barbotine scroll decoration in [419], a funnel neck rouletted beaker with overslip white decoration in [4150/4152], and an indented beaker with underslip 'S' shape barbotine decoration in [4152].

Verulanium Region (VRWW)

The fabric varies from buff to pink and displays numerous small quartz inclusions. Verulanium jar fragments are present in [555] and [554]: the example present in [555] displays a grooved square rim dated 80-140 AD.

Black-Burnished Type 2 (BB2)

Very uncommon on site and only one jar was found in association with a cremation assemblage. The fabric is hard with a sand-tempered grey core and burnished to a smooth bluish finish with acute-lattice decoration. This type probably derives from Essex.

Shell-tempered ware (SMSW)

Another distinctive group is the shell-tempered ware. This type of coarseware, in an oxidised orange to brown fabric with occasional grog inclusions, often presents burnt external surfaces and sooting, which suggests a cooking purpose. Although the main form is a wide-mouthed jar with square everted rim and rilled body, few flanged bowls have also been recorded. Although grouped under the same code (SMSW), this coarseware had several sources, the main one probably being Harrold in Bedfordshire, but also possibly Earith on the fen edge (Green 1954).

Mortaria

For the Nene Valley White Ware (NVWW) the types M47, M43 or 41, M40 or 43, M51/52, one typologically close to M39, M24 without the decoration [1792] and M50 are present within the assemblage (Perrin with Hartley, 1996, 191-99). One product from Mancetter (MAHWW) have also been identified ([8101]). Very few mortaria in an Oxford White Ware (OXWW) have been recovered, the Young forms identified are M22-8, M22 and M17. Oxford Red Slipped mortaria (OXRE) are also present within the assemblage: the form C97 (Young, 1977) in [4624]. Hadham Red Ware mortaria (HADRE) are present in quite a large quantity but are all abraded therefore difficult to identify typologically. One copy of the form M22 with multicoloured quartz grits has been identified in [1248], the fabric is similar to Hadham Red Ware and is covered by a white slip (HADWS). Mortaria from the kilns of Verulanium (VRWW) are present but in a small quantity: one in [1739] dated 90-120 AD and one stamped spout dated 90-120 AD in [4334]. The last mortarium of this assemblage consists of a White-slipped coarse oxidised sandy ware ([1665]) with black grits and a flanged grooved rim (CSWS).

Local Imports (within 5 to 20km of the site)

The remainder of the assemblage comprises coarse and relatively fine local wares catering for a relative large range of forms. The abraded state of the assemblage made the identification quite difficult, nevertheless, it has been possible to identify a few major groups and trends. The first point of interest concerns an apparently homogenous group of black-slipped wares (CSBB). All the vessels classified in that group display a thick black slip and a hard sand-temp fabric with small to medium flint inclusions. The core seems to vary from a pale grey to buff/pink colour. The nature of the inclusions as well as the texture and the colour could suggest a local origin possibly Horningsea or more generally the Cam valley. The second homogenous group consists of a very similar fabric to the one described above but without the slip (CSGR). The same remark applies concerning the possible origin. This fabric also occurs in an oxidised version (CSRE). Unfortunately, the presence of sand and flint inclusions in a large part of the coarsewares made the distinction of

different origins quite problematic. The 'classic' Horningsea fabric is quite distinctive, sand-tempered with large flint inclusions and is either oxidised or reduced (Evans 1992). Another group has been based on the association of sherds presenting a reduced fine hard calcareous fabric that is sometimes associated with reddish to grey slip. A fresh break looks, to the naked eye, usually irregular, sand tempered with very small irregular white (limestone?) inclusions (FSGR).

Romanizing wares

Foxton type butt beaker fragments (ROM1 GR) have been recovered from the pre-settlement ditch system ([4114]), the fabric is similar to the early 'romanised' type defined by G. Lucas (1997: Rom 1). Otherwise, a flagon in a buff version of a Greenhouse Farm type fabric (CH/GR) was found associated with cremation F5119.

Grog-tempered ware (GROGPNK)

The fabric is pink relatively hard and tempered with ill-sorted quartz, grog and ironrich inclusions. This fabric occurs in very small quantity in Vicar's Farm phase 1 and 3 and is probably residual Late Iron Age/Conquest period.

Cam Valley wares (CS/FS)

The vast majority of sandy wares have been grouped together under the name of Cam Valley, and though they may derive from different sources, they are presumed to be all local and probably from kiln sites along the Cam. Because of the difficulty in distinguishing clear fabrics amongst the abundant grey wares, they all have been recorded under the same code, with a broad distinction between coarse (CS) and fine sand (FS) tempered. The coarse sandy wares all have in common a hard sand-tempered fabric with small to medium flint inclusions and often display an oxidised core (CSGR). More detailed fabric description can be found in the archives, as it might be possible to differentiate different sources in the future. This group also occurs in a fully oxidised version (CSRE) which is usually either greyslipped (CSRGS) or white-slipped (CSRWS); there is also a buff/whiteware version (CSBW/WW) and a homogenous group of black-slipped and burnished wares (CSBB). Although not certain, the nature of the inclusions as well as the texture and the colour could suggest a local origin, and are essentially related to the Horningsea wares. The fine sand tempered group has generally fewer inclusions but often includes chalk, and is otherwise present in a similar range of reduced (FSGR), oxidised (FSRE), buff (FSBW/WW) and black burnished (FSBB).

Horningsea ware (HORN)

Although similar to the local grey ware described above, one fabric is quite distinct, sand-tempered with distinctive large flint inclusions and is either oxidised (HORNRE) or reduced (HORNGR), and can be white-slipped (HORNWS) or black-slipped and burnished (HORNBB). The range of forms associated seems to be quite limited and consists of flat-topped dishes, plain-rimmed dishes, flanged bowls, jars and numerous examples of storage jars with a large bifid rim (Evans 1992).

Harston Red Slipped ware (HARCC)

The examples of this local late colour-coated ware identified in this assemblage all display a red-slipped buff/pinkish-white soft fine fabric. Its production of vessels in the Oxfordshire tradition was attributed to a migrant potter (Pullinger and Young 1981).

Discussion

The pottery supply for the site consistently relies on local wares for a large part of its assemblage as can be seen from tables 7.13 and 7.14. However, there is a clear tendency for local production to decrease in importance over time against the larger, regional industries, particularly the Nene Valley, Hadham and the south Midlands

shelly ware producers (e.g. Harrold, Beds.). Figure 7.15 summarises the main sources of ceramics over each phase and while in phase I, over 80% of the pottery is locally produced, this reduces to 62% in phase II and 44% in phase III. On the whole, the figures are fairly typical of the region with the late colour-coat and shelly ware industries taking over the market from the later 3rd century. However, within the region there are differences between sites, particularly in relation to their proximity to these major industries. For example, comparing Vicar's Farm to a site further south on the chalk (Foxton) and to one further north on the fen edge (Haddenham), the three sites together show a fairly good correspondence between relative proportion of wares and proximity to source (Figure 7.16). The sites further south see a proportionate increase of Hadham and shelly wares and a decrease in Nene Valley wares, while of the Cam valley wares (including Horningsea), Vicar's Farm has a very high proportion being closest to the source. Even though all three sites are of a quite different nature – Haddenham is a rural shrine and Foxton and small farmstead – the broader patterns of access to ceramics seems to hold good.

Imported Stone

Rock Type Variability and Site Locality (K. Hayward)

Stone artefacts from Vicar's Farm amounted to 1,276 fragments from over 260 contexts and constitute a large component by both weight and quantity of all archaeological material recovered. In all, 938 fragments from 115 contexts were examined systematically with quantifiable criteria such as dimension and weight looked at. In addition, the rocks were examined using a hand lens (Gowland X10) to provide a preliminary identification of the lithology. The application of dilute Hydrochloric acid (5%) also determined whether the stone contained calcium carbonate or not. By both examining local and national geological maps and publications as well as a comparison of these artefacts with geological and archaeological reference collections together with accumulated knowledge of the specialist, it was hoped that a detailed source for each rock type could then be determined. Worked and unworked fragments were examined and subdivision based upon their function during site occupation would also be examined.

Vicar's Farm is located in a part of East Anglia/South Midlands that has quite a varied but geologically recent history. Within 10 miles of the site are a whole suite of sedimentary rocks ranging in age from Middle Jurassic Oxford Clays and Corallian Limestones through to younger Cretaceous Greensands and Chalk and finally an important component of recent Quaternary and Holocene glacial, fluvial and fluvio-glacial sediments (see table 7.16). A majority of these young sediments reflect the geology of south-east Britain as a whole, which is bereft of suitable hard rocks for both building construction and in producing portable artefacts. Vicar's Farm itself is sited upon both soft Lower Cretaceous fine grained Gault Clay (100 million years) as well as much younger palaeochannel sandy gravels from the Ipswichian Interglacial (120,000 years), both forming low undulating ground up to 20 metres high. The ground slopes down eastwards to the terrace and recent alluvial flood plain of the Cam valley between half and one mile away. This important local river dissects the older Gault from the lithologically more resilient, younger, north east-south west trending Lower Chalk to the east, characterised by a higher (50 metres) slightly undulating topography. Sandier glauconitic units from the Lower Greensand and

Cambridge Greensand of the Lower Chalk are also found within 1 mile of the site, as are spreads of glacial boulder clay. To the north of the site, very flat fenland is split up by low lying ridges of Lower Greensand (Haddenham-Streatham ridge) and older Jurassic Upware Limestone of the Corallian (Upware-Barway ridge). The latter runs alongside the River Cam, 6 miles north of Cambridge. Suitable building stone is scarce in this region with only Burwell Stone, a chalk rock from the Lower Chalk being utilised in medieval Cambridge (Worssam et al, 1969). Flint from the Middle Chalk was also widely used but does not outcrop so close to Cambridge.

At least eighteen rock types have been identified at Vicar's Farm, which is located in an area containing relatively few suitably hard local lithologies. Whilst some of these are local such as Chalk and Lower Greensand, the vast majority outcrop at least 40 miles away from the site encompassing a very large geographical catchment area. This reflects the sites location, near to the junction of two major Roman routes which join at the relatively important nodal point of *Dvroliponte. Via Devana* runs to within one mile of the site on the north side. This important early route, constructed between AD43 and 44 runs from the original provincial capital of *Camulodunum* through to Godmanchester. The presence of German Lavastone quernstones during Phase Ia may indicate the influence of sea transportation from the Rhineland to *Camulodunum* and subsequent delivery via the *Via Devana* to this site. Millstone Grit from the southern Pennines may have also been transported along this route, although it is important to consider the important influence of Millstone Grit at pre-Roman sites in central England such as at Hunsbury Hill Fort (Peacock 1987: 76) where prehistoric trackways would have been utilised.

The second major artery, Eastern Akeman Street, runs near the east of the site, in a NE-SW orientation from Northern East Anglia towards *Londinium* and sites in southern and western *Britannia.* This route could have supplied greensand from Culham in Oxfordshire, Hertfordshire Pudding Stone and Forest of Dean Devonian Sandstones. In addition, the proximity of the River Cam, which runs northward towards the Wash could have provided yet another route. At Upware, 8 miles from the site, GR (TL 540 700), the Cam runs alongside both Lower Greensand and Corallian (Upware Limestone) outcrops. Both of these lithologies are found at Vicar's Farm. Finally, the influence of the Car Dyke waterway, just north of *Dvroliponte,* and possibly constructed during AD 120 (Whitwell 1992: 57) may have had an influence on the transportation of Middle Jurassic Collyweston Slate and Ketton Stone. This 56 mile waterway, runs near to the River Gwash at Stamford which is proximal to the outcrops of these two building stones.

Discussion

While it seems probable that Vicar's Farm was producing surplus grain and flour, and possibly also meat, it was also importing much of its material culture, including pottery, stone and metalwork. The primary question surrounding the economy at the site, particularly given the evidence for surplus production, is whether such production was linked to a larger, yet internally self-sufficient system (such as the army, the town or a large-scale peri-urban/villa type estate) or whether it was part of a much broader market economy. If production was being managed from a central authority for self provision of a larger entity like the army, an estate or the town, one might not expect to see much reliance on monetary exchange or indeed for trading

activity (as opposed to traded goods) in general; but if Vicar's Farm was producing for a wider market or at least operating within a market economy, then coinage and trade in general might be a more prominent facet of the site. Certainly there was a relatively high number of coins retrieved from the site (over 300; see Reece, below), which does suggest a rather active involvement in a market economy. There is also more tentative evidence for trading in the form of weights and part of a balance, although the Roman attribution of these items is not unequivocal (see Crummy, below). On the other hand, weights and scales might be expected on any rural settlement and the presence of coins could be related to other practices such as religious/ritual offerings, and Vicar's Farm does compare well with the coin loss pattern for such sites (see Reece below).

Nevertheless, religion and trade are not mutually exclusive, indeed the two might be positively correlated, and the presence of the shrine and other ritual features and deposits at Vicar's Farm is perhaps also a little unusual if this is simply an agricultural settlement/farmstead. There is also some evidence for military presence in the form of a few military dress items and weapons, but as with the weights, their attribution is tentative (see Crummy below). Certainly the possibility of the military being a recipient of the surplus produce should be considered, as has been suggested for Orton Hall Farm (Mackreth 1996). However, military items do not necessarily imply military presence, indeed the nature of what constitutes a military presence is open to interpretation (James 2001). But even if the army was receiving surplus produce from Vicar's Farm, this does not imply they were organizing production, let alone had a presence on the site. Detailed examination of the relevant artefactual categories is given below followed by a concluding discussion on the nature of exchange and its significance to the site as a whole.

Coins (R. Reece)

A total of 339 Roman coins were examined by Adrian Challands (in Lucas & Whittaker 2001). 261 coins were positively identified, the remaining 78 coins were approximately identified, on the basis of general appearance and size, to general minting periods which varied between 50 and 200 years. On a numerical basis over half of the positively identified coins were minted between AD 330 and 378 and a third were minted between AD 260 and 275. The Roman coin population at the Vicar's Farm site is sufficiently large to allow for statistical analysis. The coins have been summarised by the usual periods as *cam vf*. For comparison the coins from Castle Hill Cambridge have been added as *cam 1* and from Shire Hall as *cam 2*. A close scrutiny of the published lists suggests that the coins from Castle Hill group have accidentally been doubled and printed twice; coins 190 to 229 have therefore been omitted in the present calculations. If they need to be put back in, the diagrams will change very little because they seem to be virtually identical to coins 133 to 167. The two Castle Hill groups have been added together to produce *cam ch* and this has been added to *cam vf* to produce an overall total, *cam tot*.

Cam 1, *cam 2*, and *cam vf* have been processed by the usual method (Reece 1995) and this produces Figure 7.17. The three groups have rather different profiles. *Cam l* is remarkable for its adherence to the British mean -- the zero line. Its early coins are average - virtually on the line. There is an above average move upwards at Trajan (AD 98-117) and then an average presence till about AD 260, where the line runs parallel with the mean. Thereafter slightly more than average radiates (AD 260 to

296) are added, the line goes up, but the expected number of coins are not lost from AD 330 to 348 so the line then drops sharply. Coins from AD 348 to the end are lost at almost exactly the average rate.

Shire Hall (*cam 2*) is very close to the British average up to AD 260 but the expected bulge of radiates (AD 260 to 275) does not arrive so the line drops sharply. Barbarous radiates (AD 275 to 290) improve matters slightly but there is continuous, well below average coin loss throughout the fourth century till a surprising bulge of coins of the House of Theodosius (AD 388 to 402) that is, 14 out of a total of 51 coins. Vicar's Farm (*cam vf*) is closer to the British rural pattern with some coin loss, but below average until AD 260. The radiate period (AD 260-90) does not produce the usual British recovery, though coin loss from AD 296 to 330 is roughly at the average British rate. Suddenly after AD 330 more coins than average are lost, and the period AD 364-378 shows loss well above average. Figure 7.18 shows that the larger numbers of coins from *cam vf* influence the Cambridge total strongly and make the AD 364-378 coins the major event,

On a wider scale, Castle Hill (*cam 1*) congregates with a group of British sites whose main characteristic is close-to-average coin loss. Shire Hall (*cam 2*) with its AD 388-402 event fits in a very mixed bag which includes the Corinium Museum, Dorchester on Thames, and then a group of Eastern sites: The Cow Roast (Herts.), Thistleton (Rutland), Ashton (Northants.), Chelmsford Temple (Essex), and Water Newton (Cambs.). If *cam 1* and *cam 2* are added together they remain in this same easterly group. Vicar's Farm (*cam vf*) belongs with a very religious group, which includes Nettleton (temple), Lamyatt Beacon (temple), Uley (temple), Lullingstone (Housechurch) and Gatcombe. Other sites could be added to this group in which temple sites seem to flourish above average in AD 364-378. When all the *cam* sites are added together the pattern matches with small towns like Ashton, Wanborough, Shakenoak, the villa Frocester Court, and the larger but rather odd towns groups of Silchester and Canterbury A. Most seem affected by a lower than average coin loss from AD 260 to 296. Comparison with other "local" sites of Haddenham and Stonea (casual losses) primarily revealed a remarkable agreement between the casual finds at Stonea (which are quite different from the excavated coins), and the first group from Cambridge (*cam 1*/Castle Hill). Movement of the lines is almost completely parallel with slight differences of scale (actual numbers lost) from time to time.

Weights and Balance (with N. Crummy)

A large number of weights were retrieved from the site by metal detecting, but most of these turned out to be Medieval in date (see Chapter 1). Even the few weights which have been ascribed a Roman date on the basis of form or context are ambiguous, but they are listed below (Figure 7.19).

a) <4436> SF 512. Well-formed biconical lead weight with iron rod for suspension embedded in one end. Length 34 mm, diameter 28 mm. Weight 99 g; underweight for 4 oz. Possibly Roman, but it is most likely to belong with the high number of Medieval weights in the assemblage. (Figure 7.19: 1)

b) <4416> SF 387. Biconical lead weight, quite roughly formed. Length 21 mm, maximum diameter 28 mm. Weight 74 g; underweight for 3 oz.

c) <4426> SF 486. Biconical lead weight, similar to <4416> above. Length 23 mm, diameter 28 mm. Weight 79 g = 3 oz. Prob. Also Roman too.

d) Not illustrated. <4502> b. [791] F5303. Iron Hook with loop for suspension. Possibly from a large balance or steelyard, or perhaps the terminal of a chain. Length 81 mm.

Military Artefacts (N. Crummy)

Two spear points are both unstratified and may not be Roman, though similar forms can be found in the Roman period. A number of copper-alloy studs for attachment to leather straps are again quite similar to items of auxiliary equipment, but are not sufficiently precise parallels to be clear indicators of a military presence (Figure 7.19).

a) <4750> SF 120. Decoratively moulded copper-alloy boss with broken projection on one side, probably a pierced strip or hinge for attachment. The rim is beaded, the raised centre is defined by a moulding grooved to imitate cabling, within which is knurled step at the foot of a domed boss with radiating grooves. Diameter 37 mm. The decorated mouldings are close to those on fittings from auxiliary equipment (Oldenstein 1976, Taf 71, 947-8), but the quality of the metal suggests this item may be post-Roman. A medieval bridle boss from Exeter is similar in size and style, (Goodall 1984, fig 192, 147). (Figure 7.19: 2)

b) <4791> SF 456. Copper-alloy stud with two projections on the underside for attachment. One of the latter is damaged. There is a slight irregular central dome, hollow on the underside. Probably from a leather strap. Diameter 30 mm, height 10 mm. This may be from cavalry harness, *cf* Oldenstein 1976, Taf 49. (Figure 7.19: 3)

c) <4752> SF 133. Large riveted copper-alloy stud for attachment to leather, with circular conical head. Diameter 25 mm, height 16 mm. A similar stud from auxiliary equipment came from Feldberg on the German *limes* (Oldenstein 1976, Taf 47, 490). (Figure 7.19: 4)

d) <4715> [8262]. Long socketed spear or *pilum* point, with simple tapering blade. The socket is round in section, the blade square. Iron, Length 320 mm. Compare Bishop & Coulston 1993, fig 34, 2, and Manning 1985, pl 79, V114, which has a strong midrib on a very narrow blade. Medieval arrowheads can take this form, but are in general at least some 100 mm shorter (Goodall 1982, fig 42, 152-9). (Figure 7.19: 5)

e) <4717>. Socketed spear point, with thin curved blade narrower than the socket. There is no noticeable midrib. Similar to Manning's Group III (1985, 166-7), and Bishop & Coulston 1993, fig 84, 1. Iron, Length 191 mm. (Figure 7.19: 6)

f) Not illustrated. <4501>. [775] F5309. Period II. Very corroded socketed object, possibly a weapon head. Iron, Length 168 mm.

Economy and Ownership at Vicar's Farm

Determining whether the settlement at Vicar's Farm was under a central authority is a difficult problem, and perhaps unsolvable. It is unlikely to be a military-run establishment, simply because this was not necessarily how the army operated or gained their supplies, though the military could of course have been a recipient of its agricultural produce. Similarly, Vicar's Farm could well have supplied the town at Cambridge but again, it is doubtful whether it was actually administered from an urban authority. It is more likely the settlement was an independent or part of an independent peri-urban estate, which was producing for a local and possibly wider market. The settlement seemed to be a thriving place, at least by the late Roman period and agricultural production and sale of surplus was only one aspect to its role in the wider landscape. Examining the composition and distribution of the various

small finds categories in relation to other sites can help to shed some light on what this role was.

Figures 7.20 and 7.21 show the distribution of coins and small finds (excluding grave goods) on the site. The coins overall cluster in the core area which is as one might expect perhaps. Quite a number occur around the shrine but by far the greatest concentration occurs on the eastern side of the internal pathway, particularly around the curvilinear enclosures. This is interesting in terms of the proposed interpretation of these features as livestock enclosures, and it might suggest this was an area where sale of livestock took place. Another fairly distinct cluster of coins occurs in a linear swathe along the metalled surfaces (F5471 and F4767) in the northern part of the core; this area was interpreted as possible surfacing for temporary structures/stalls and again, this might have been an area where trading was carried out. Looking at the small finds distribution, two of the weights and the balance hook came from the area around the curvilinear enclosure and another weight came from the metalled surface, which might support this interpretation. On the whole however, the small finds are fairly thin on the ground, especially around the western side of the settlement core where the shrine and aisled building lie. Overall, the small finds distribution is not too informative except that it reflects again, the fact that occupation was focused in the core area of the site.

If the distribution plots are not too revealing, the actual composition of the small finds assemblage may be more informative. Table 7.17 shows the quantities of small finds according to broad functional group for Vicar's Farm and three other sites in the region: the shrine at Haddenham, the administrative centre or settlement at Stonea, and the rural farmstead at Haddon. Vicar's Farm clearly bears closest resemblance to Stonea, not only in the diversity of objects but also the frequency. The Haddenham shrine is a specialist site and this is reflected in the very limited repertoire which is dominated by dress items, most of which were probably offerings. The farmstead at Haddon is also dominated by these types of objects, but there is other categories also represented, even if in low numbers. Nevertheless, it is perhaps no coincidence that the main offerings at a rural shrine are comparable with the most common small finds category from a rural farmstead or settlement. The Vicar's Farm assemblage though is clearly much closer to a major centre like Stonea than a rural settlement, and displays a much wider and more abundant number of such small finds indicative of a range of activities. It suggests a settlement much more active in the local economy and also possibly one more Romanized. Given its proximity to the town, this is perhaps not surprising, but it may be that as well as producing surplus produce, Vicar's Farm was also a seasonal market place where such produce was traded. Indeed, a hinterland site such as this, only a few kilometers from the town, may have been a more viable market place than the town itself, especially in terms of agricultural produce.

If the settlement is seen as playing this important economic role in the locality, who was controlling or running this establishment? The army and an urban authority have already been discounted as unlikely, and the preferred option would be an independent landowner, either living on site, in the town or on another estate nearby. In phases I and II, there is a substantial dwelling, the aisled hall which though not a stone building, would have still been fairly spacious and an acceptable residence for the owners family and their dependents. Yet the lack of a proper or substantial structure in the last phase of the site, when it is economically and materially at its

wealthiest, is disconcerting. The possibility of another, possibly stone structure outside the excavated area to the east has been raised, but there was no real evidence to support this. If there is no major dwelling associated with the settlement in its final phase, then the owner may have lived in town, or on another estate nearby. The closest known villa estate lies on the north side of the town at Arbury, but there may be others as yet undetected. Indeed, stone coffin burials north of Vicar's Farm (see Chapter 1) clearly belonged to high status individuals, and these are perhaps too far away from the town walls to be associated with an urban dweller. It is possible these burials are associated with a nearby residence and which housed the owners of Vicar's Farm. Sited on the high ground above the settlement, this would be an obvious place to locate a residence overlooking Vicar's Farm.

Town and Countryside Context (with C. Evans)

The town, as in many cases in southern Britain, appears to have been fringed by extra-mural and peri-urban settlements of various types – with industrial activity closer to the town and agricultural further out (Figure 7.22). Close to the town walls, on the eastern side there is the Jesus Lane pottery (Hughes 1902), while at the southwest gate intense extra-mural settlement is indicated by casual finds from the last century (see Chapter 1), and at the western gate, industrial activity was recorded at New Hall (Evans 1996). Further out, on the north side lies the villa estates at Arbury (Alexander 1968 & 1969) and at Milton (Reynolds 1994 & forthcoming), while to the west is Vicar's Farm. To the south, a villa has been identified from cropmarks north of Shelford (SAM Cam 57) and this entitlement was also applied to the masonry remains found by Walker at Perse School in 1911 (Walker 1911; later 19th century findings at Coldham's Lane on the east side of Cambridge might also attest to another such candidate). This pattern of hinterland development suggests that it was here that the real economic activity was carried out – industrial and agricultural production, and possibly even trade, while within the town walls, residences and public buildings were mainly located.

There is a strong sense that the town was rung at a distance some 1-2km by major central authority/villa holdings, and that within the immediate Cambridge area these larger units appear to have become the main basis of 'land-management'/property holding from the later 2nd/3rd century AD, replacing the smaller farmstead compounds of the Late Iron Age/Early Roman period (see Lucas 2000 for discussion). Given this, and the apparent 'encirclement' of such substantial settlements around the town, two models of later Roman hinterland-use can be suggested:

1) The hinterland estates were essentially responsible for the town's agricultural needs, controlling and farming almost all the land up to the town's immediate suburbs/walls.

2) That the c. 1km swathe surrounding the town was controlled and farmed by townspeople themselves (and perhaps scattered, client-associated small farms), with the estate lands only lying beyond this swathe.

Unfortunately, these has yet to be sufficient investigation to adequately determine which of these is the more appropriate.

One of the problems trying to detail the site's relationship to Roman Cambridge is just how little is known of the Roman town itself. What has been established suggests that was of fairy modest scale. (This is emphasized by the fact that the Vicar's Farm excavations produced approximately twice the number of coins than from three decades of fieldwork by Alexander *et al.* in the town proper.) Lacking major cemeteries, its occupation does not seem intense and it evidently had few buildings of any consequence - its putative mansio and the Rigeon's Garden shrine (Alexander & Pullinger 1999). Yet, at least in part, this is determined by the bias' and conditions of pre-1990s excavation upon the Castle Hill proper, where since Alexander *et al.*'s campaigns in the mid 1980s there has been no significant exposures. However, during the last decade there have been a number of important small-scale excavations along the lower eastern side of the hill and the 'lower town' of Cambridge on the opposite side of the river (Evans in Alexander & Pullinger 1999). These are beginning to substantially alter our picture of the Roman town and include the recovery of substantial 1st century AD Roman assemblages at Castle Street (Alexander 1996), the Chesterton Lane sewage shaft (Mortimer & Regan 2001) and, most recently, at the ADC Theatre on Park Street (Whitaker forthcoming; Late Iron Age material was also recovered at the latter two; during the construction of the Student's Union Building earlier in the century much early Roman material was reported). Alexander *et al.* recovered little Early Roman material on Castle Hill-top (Alexander & Pullinger 1999), and the evidence begins to suggest that 'the weight' of the early Roman settlement was around the bridgehead on either side of the river.

More surprising is what seems to be the possible scale of the lower town's cemetery. During the renovation of three terrace houses at 35-37 Jesus Lane in 2001, a dense 2nd-4th century Roman cemetery was discovered and some 35 inhumation excavated (Alexander 2001). A number were cut into the fills of, and most were otherwise aligned with, a series early Roman ditches. Quantities of occupation material were recovered and, for the first time, this settlement evidence provides some degree of context for the earlier Jesus Lane kiln discoveries. Immediately thereafter, as part of an on-going Jesus College renovation programme, below-cellar deposits were investigated at No. 11 Park St. What seemed to be more of the same cemetery was there revealed, with the remains of three adult inhumations and six child burials found (Dodwell 2002). This property lies 150m west of the 35-37 Jesus Lane exposure, and subsequent archival researches (including inspection of human remains within the Dept. of Biological Anthropology's Duckworth Collection - material not listed in the town's SMR) indicates that during the later 19th century burials had been recovered throughout this area during drainage/sewage works and construction (e.g. the Friends Meeting House). If, indeed, the Jesus Lane and Park St. Roman burials are a part of the same cemetery, then - and in reference to other recent sondages producing negative evidence - it must extend over 100m+ x 150m+ and contain at least some 700-800 burials. This represents the first really major Roman cemetery identified for the town and suggests the Roman Cambridge was a more substantial settlement than we have come to think. Previous to this discovery - especially given the recovery of low-level industry within the area of the town's walls - based on the evidence to date, one could even realistically doubt whether Roman Cambridge warranted the designation of a 'town' at all.

Seeming to call for a major re-appraisal of the status of the Roman town, this little helps us in the evaluation of the Vicar's Farm site. Involving agrarian, mortuary/ritual

and mercantile activity (with a military presence), the site itself avoids ready labeling - possibly the 'backside' of a villa or some manner of ubiquitous 'central authority' agricultural estate and market. Against this, none of the area's villas have been published to allow us to weigh the site's assignation in terms of comparative economic/agricultural 'base-lines'. Equally, it must be said that none of the exposures within Roman Cambridge proper have been sufficiently large or thoroughly enough excavated (and/or published) to provide a firm basis of a 'town-perspective'. Perhaps a sense of necessary ambiguity is an appropriate note by which to conclude. While the Vicar's Farm complex may evade easy appellation, its detailed excavation should hopefully provide a firm basis by which advance and begin to build a more nuanced understanding of Roman Cambridge and its hinterland.

References

Abbreviations

RIB II.2 - Collingwood, R. G. and Wright, R. P., *The Roman Inscriptions of Britain Volume II Instrumentum Domesticum (personal belongings and the like)*. Fascicule 2, Frere, S. S. and Tomlin, R. S. O. (eds) (Stroud, 1991).

VCH Essex - Victoria County History of England. A history of Essex volume III (1963 London).

BAR - British Archaeological Research

CBA - Council for British Archaeology

SFECAG - Société Française d'Etude de la Céramique Antique en Gaule

TRAC - Theoritical Roman Archaeological Conference

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Plate I

Plate II

Plate III

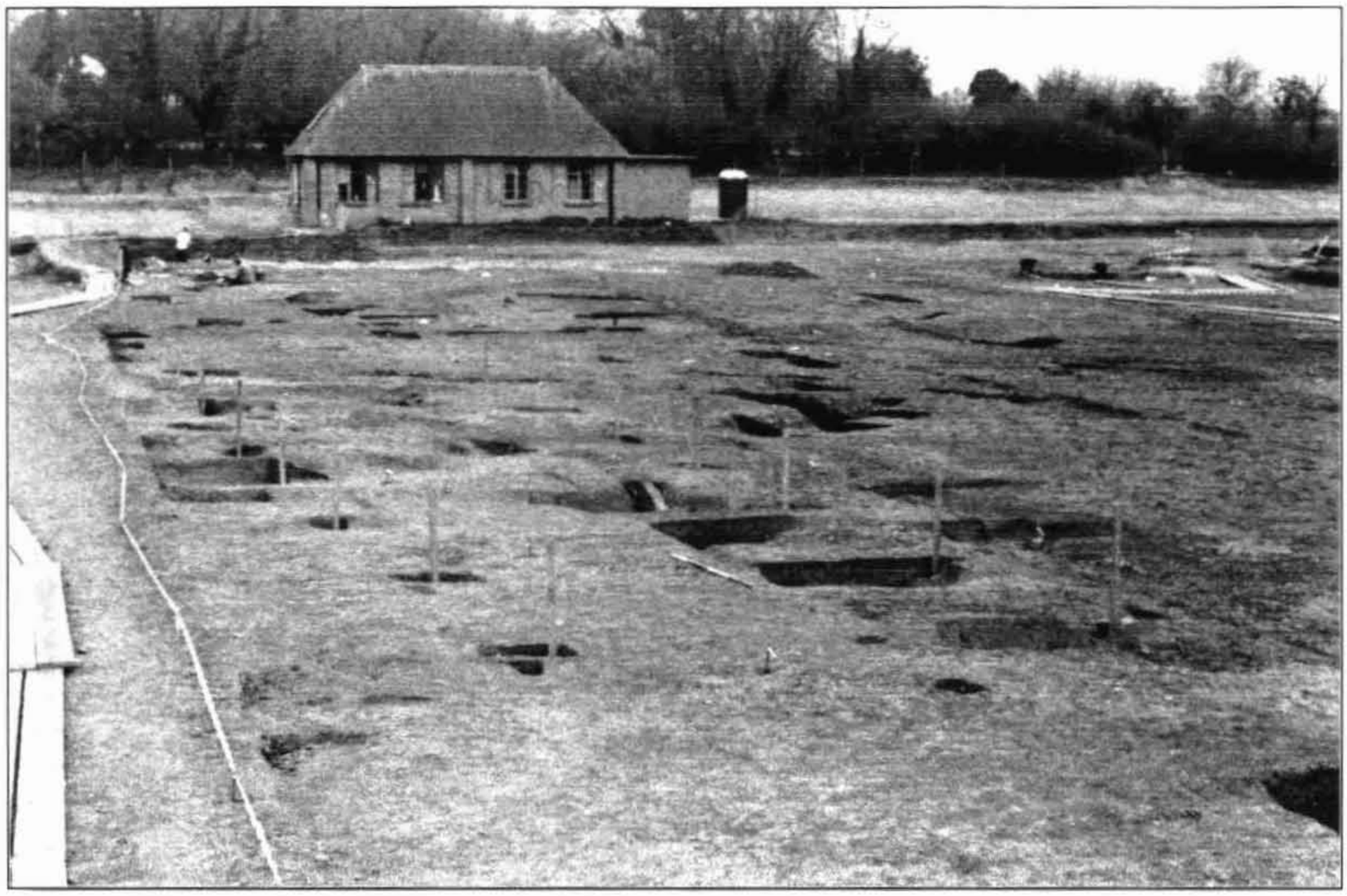
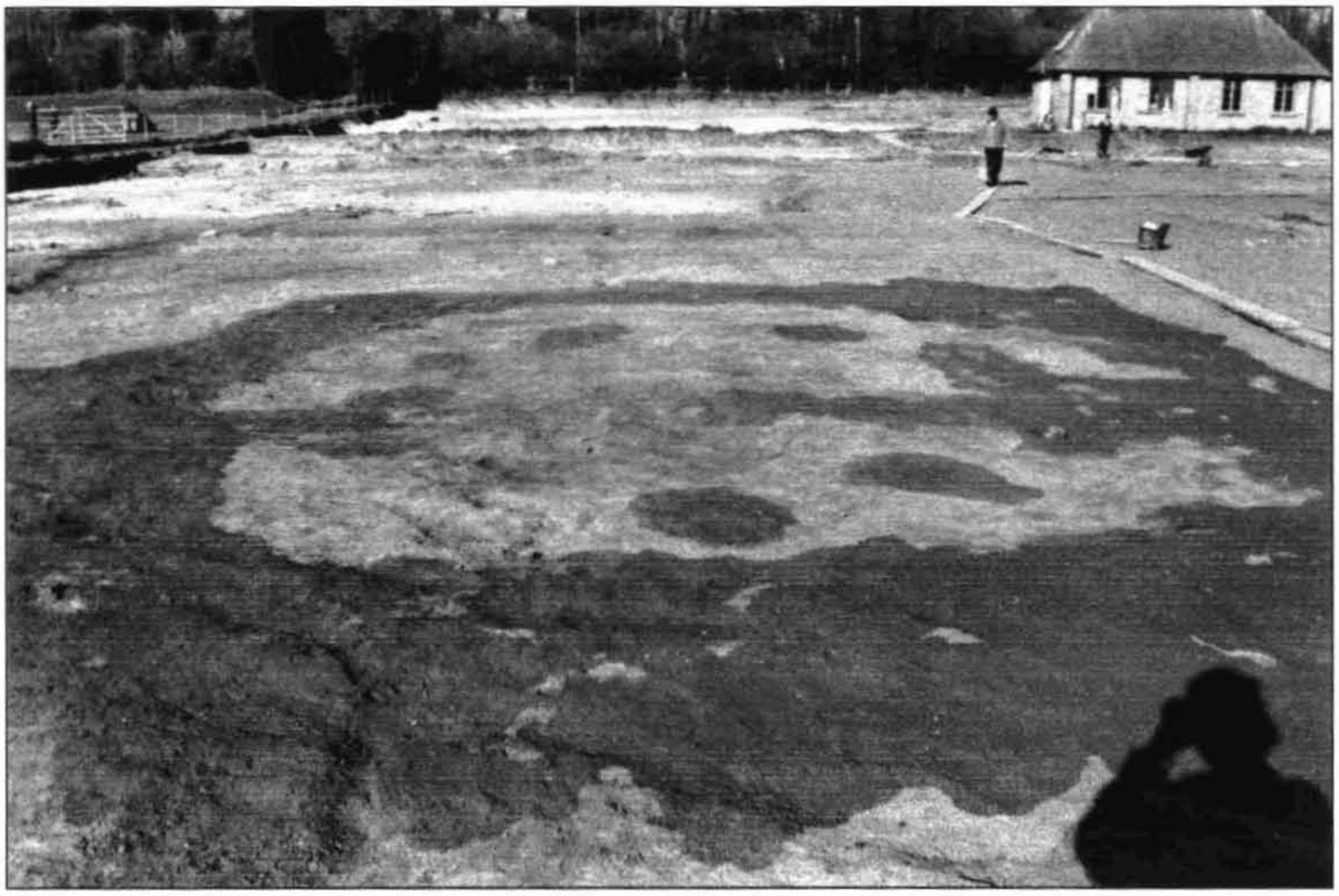


Plate IV



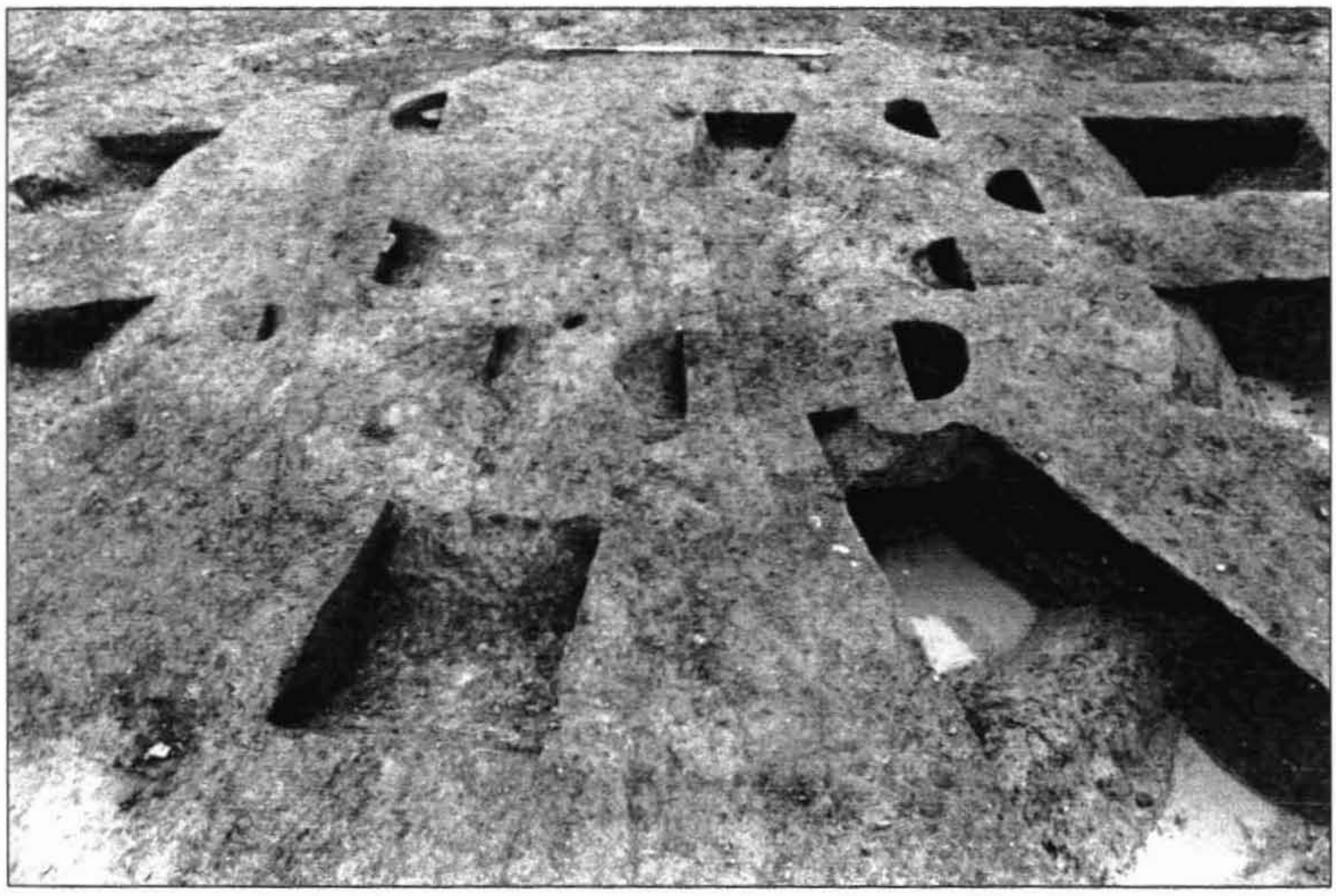
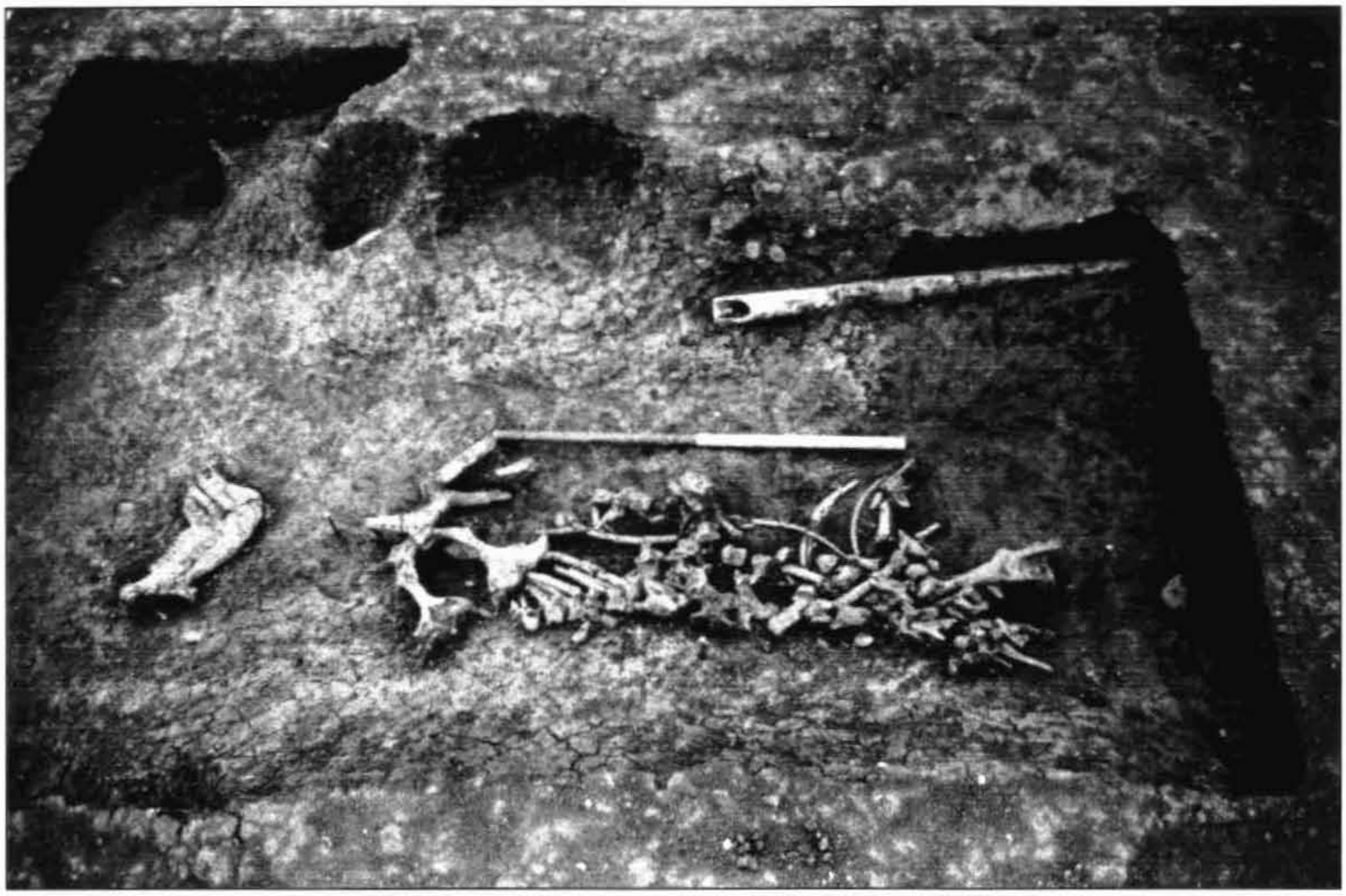


Plate V

Plate VI



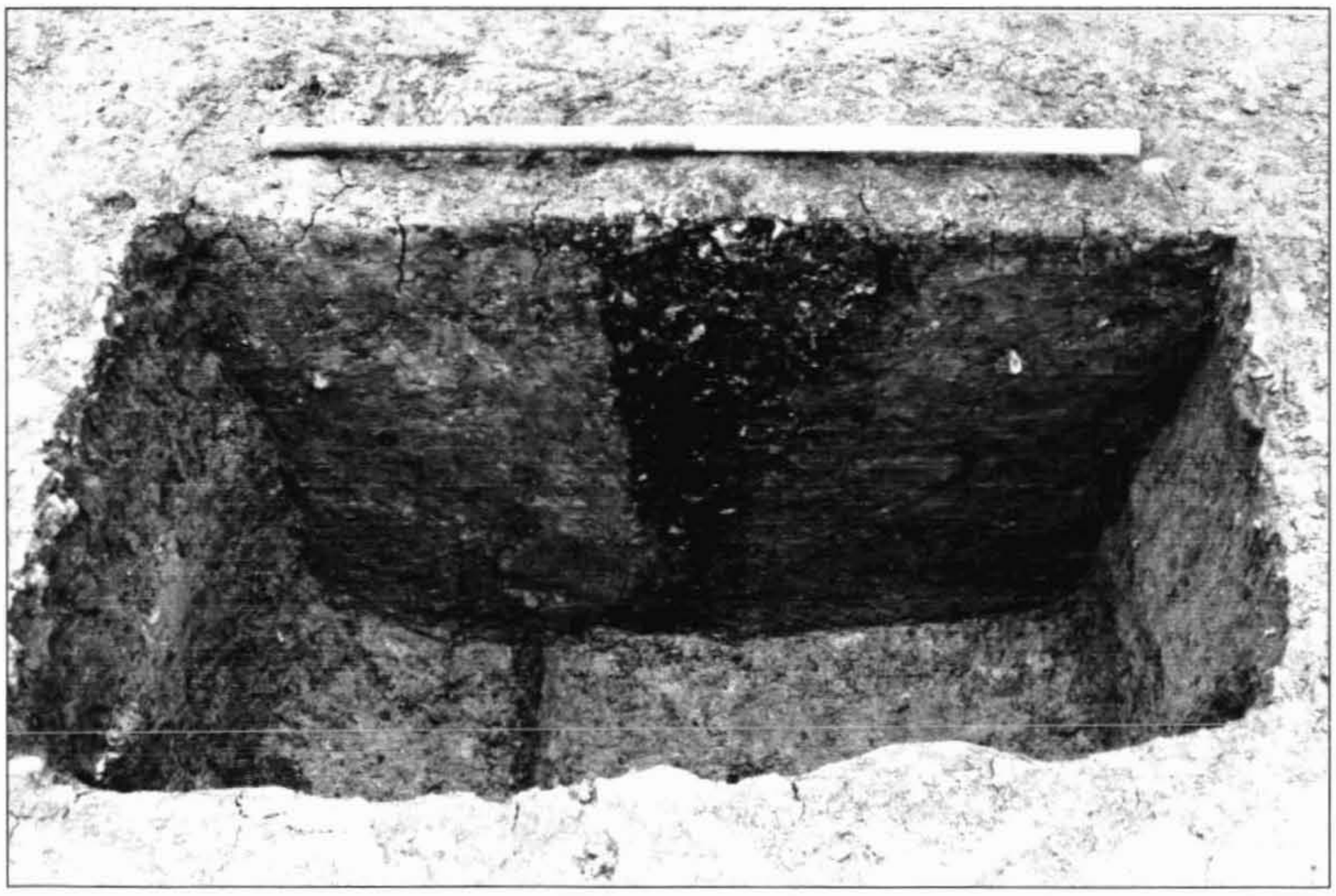


Plate VII

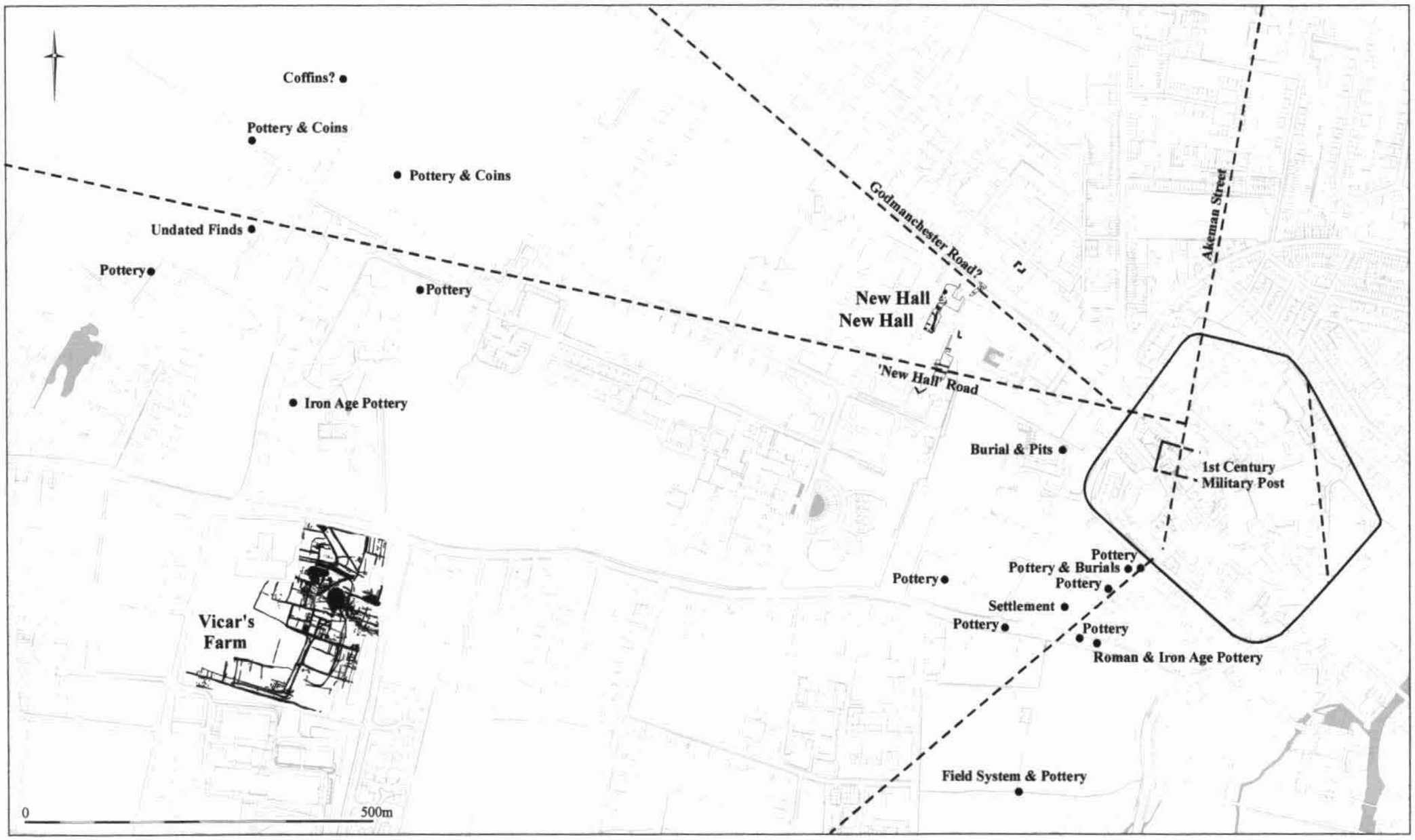

Coffins?
Pottery & Coins
Pottery & Coins
Undated Finds
Pottery
Pottery
Iron Age Pottery
Godmanchester Road?
Akeman Street
New Hall
New Hall
'New Hall' Road
Burial & Pits
1st Century
Military Post
Pottery
Pottery & Burials
Pottery
Pottery
Settlement
Pottery
Pottery
Roman & Iron Age Pottery
Vicar's
Farm
Field System & Pottery
0
500m

FIG 1.1

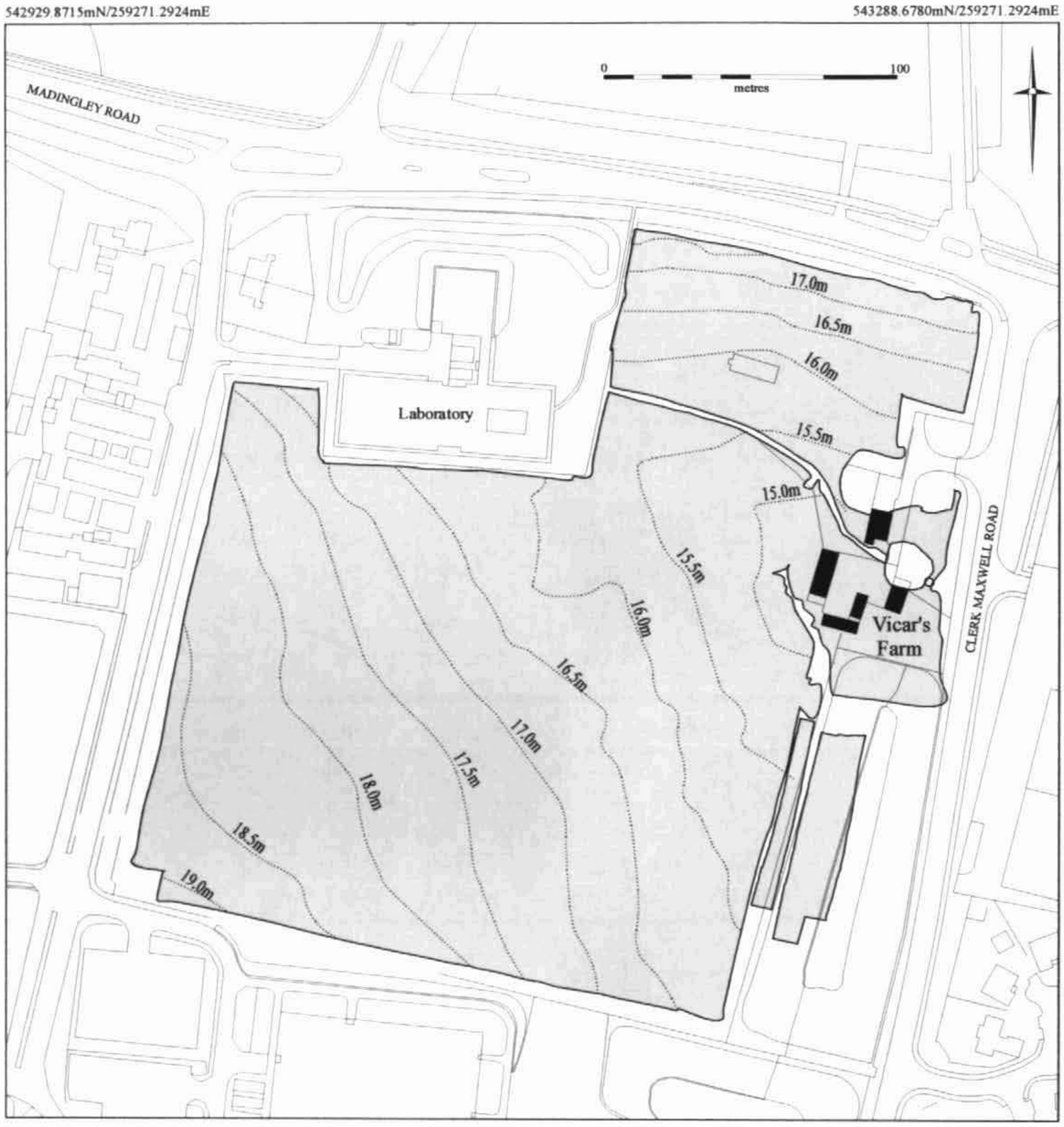

542929.8715mN/259271.2924mE
543288.6780mN/259271.2924mE
0
100
metres
MADINGLEY ROAD
Laboratory
17.0m
16.5m
16.0m
15.5m
15.0m
15.5m
16.0m
16.5m
17.0m
17.5m
18.0m
18.5m
19.0m
Vicar's Farm
CLERK MAXWELL ROAD
542929.8715mN/258895.6771mE
543288.6780mN/258895.6771mE

FIG 1.2

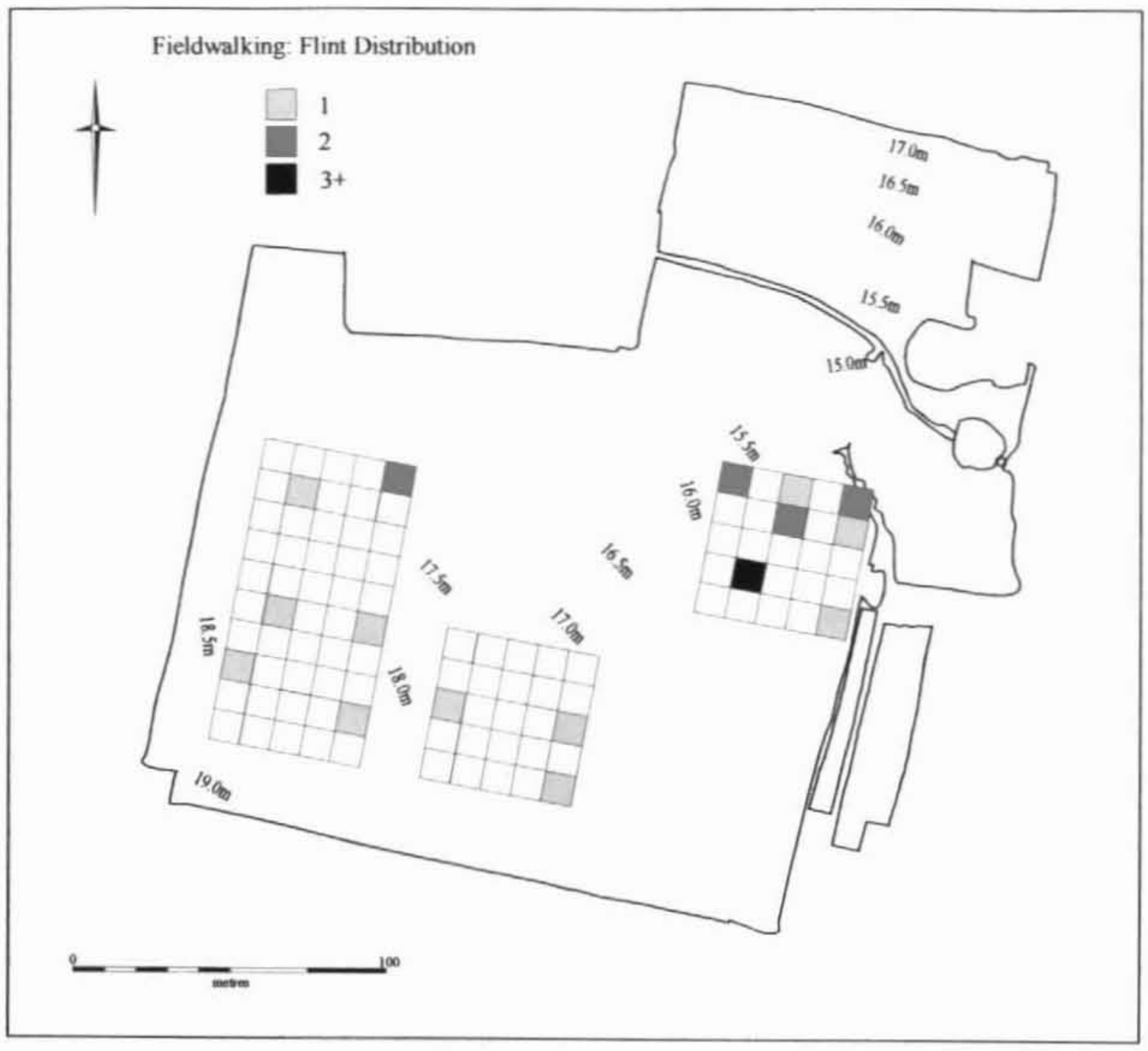

Fieldwalking: Flint Distribution
1
2
3+
17.0m
16.5m
16.0m
15.5m
15.0m
15.5m
16.0m
16.5m
17.0m
17.5m
18.0m
18.5m
19.0m
0
100
metres

FIG 1.3

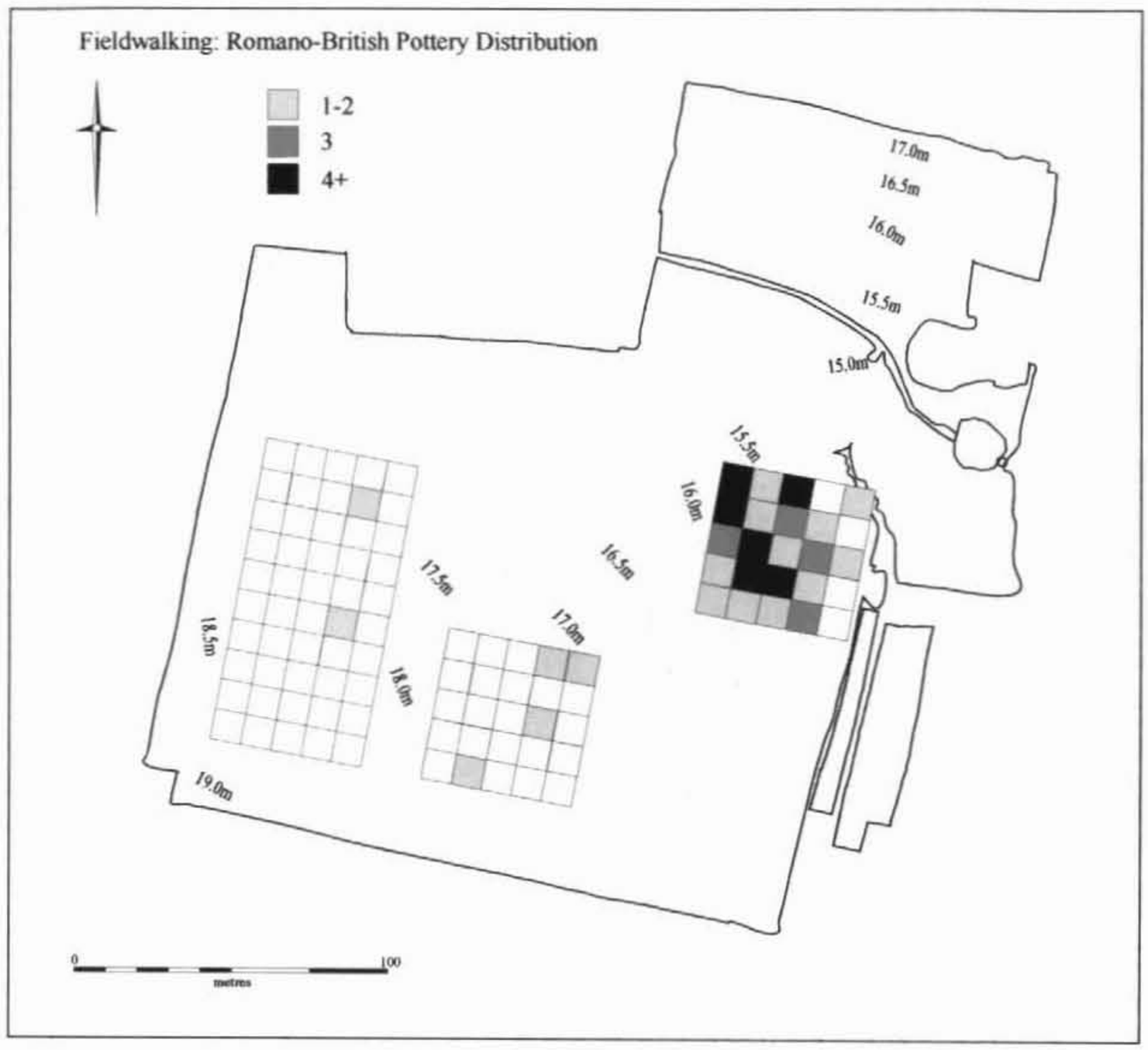

Fieldwalking: Romano-British Pottery Distribution
1-2
3
4+
17.0m
16.5m
16.0m
15.5m
15.0m
15.5m
16.0m
16.5m
17.5m
17.0m
18.5m
18.0m
19.0m
0
100
metres

FIG 1.4

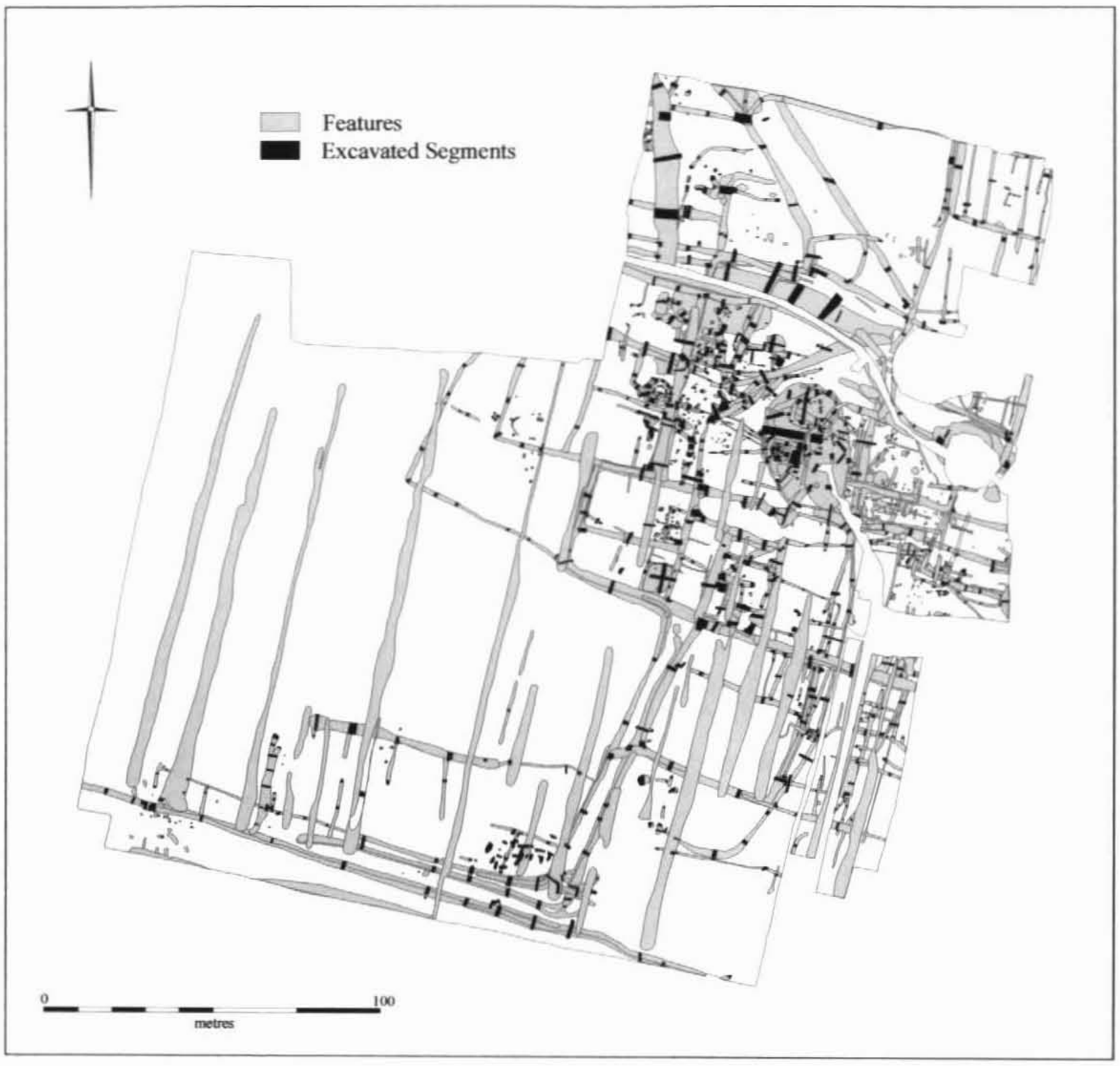


FIG 1.5

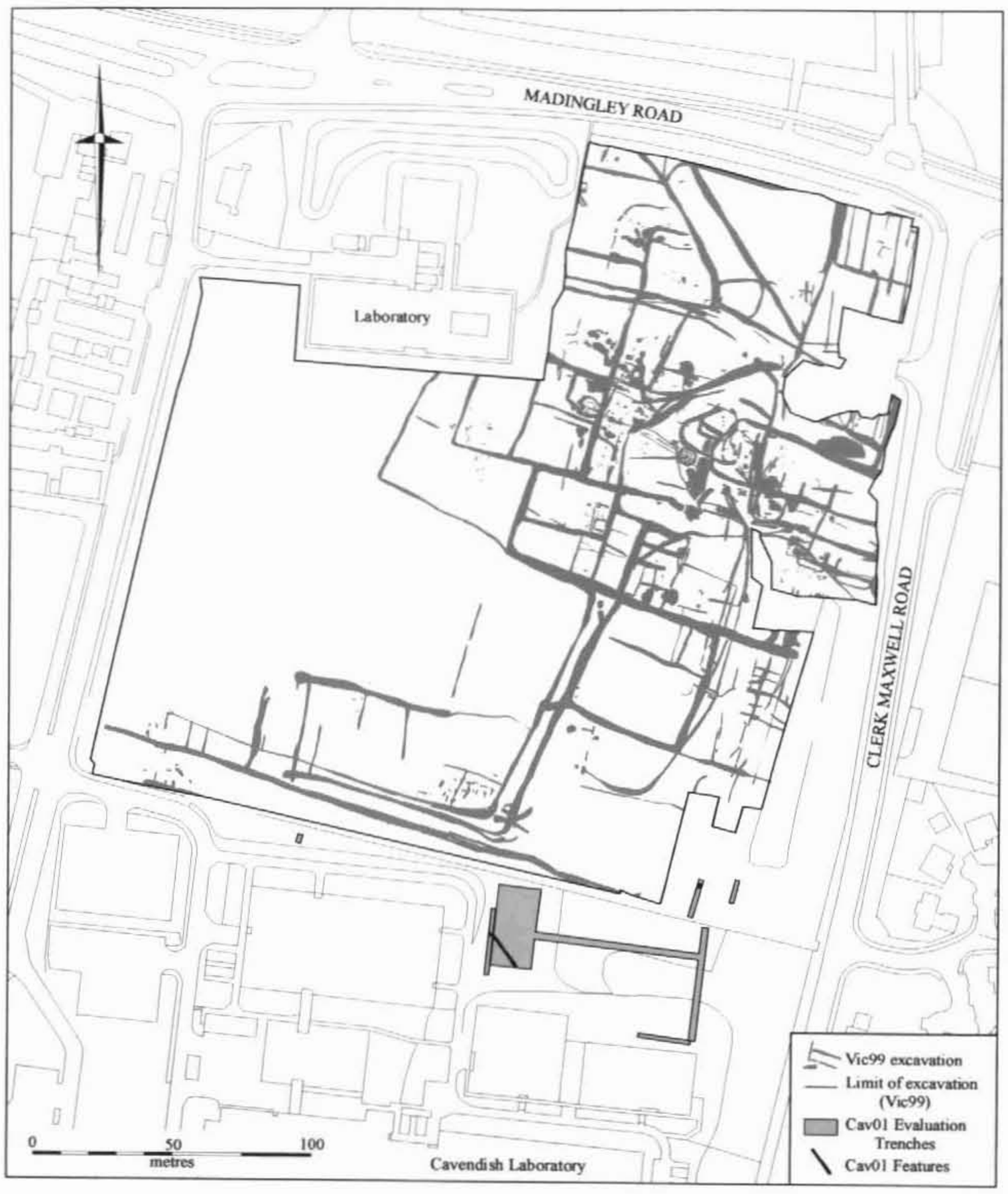

MADINGLEY ROAD
Laboratory
CLERK MAXWELL ROAD
Cavendish Laboratory
0
50
100
metres
Vic99 excavation
Limit of excavation (Vic99)
Cav01 Evaluation Trenches
Cav01 Features

FIG 1.6

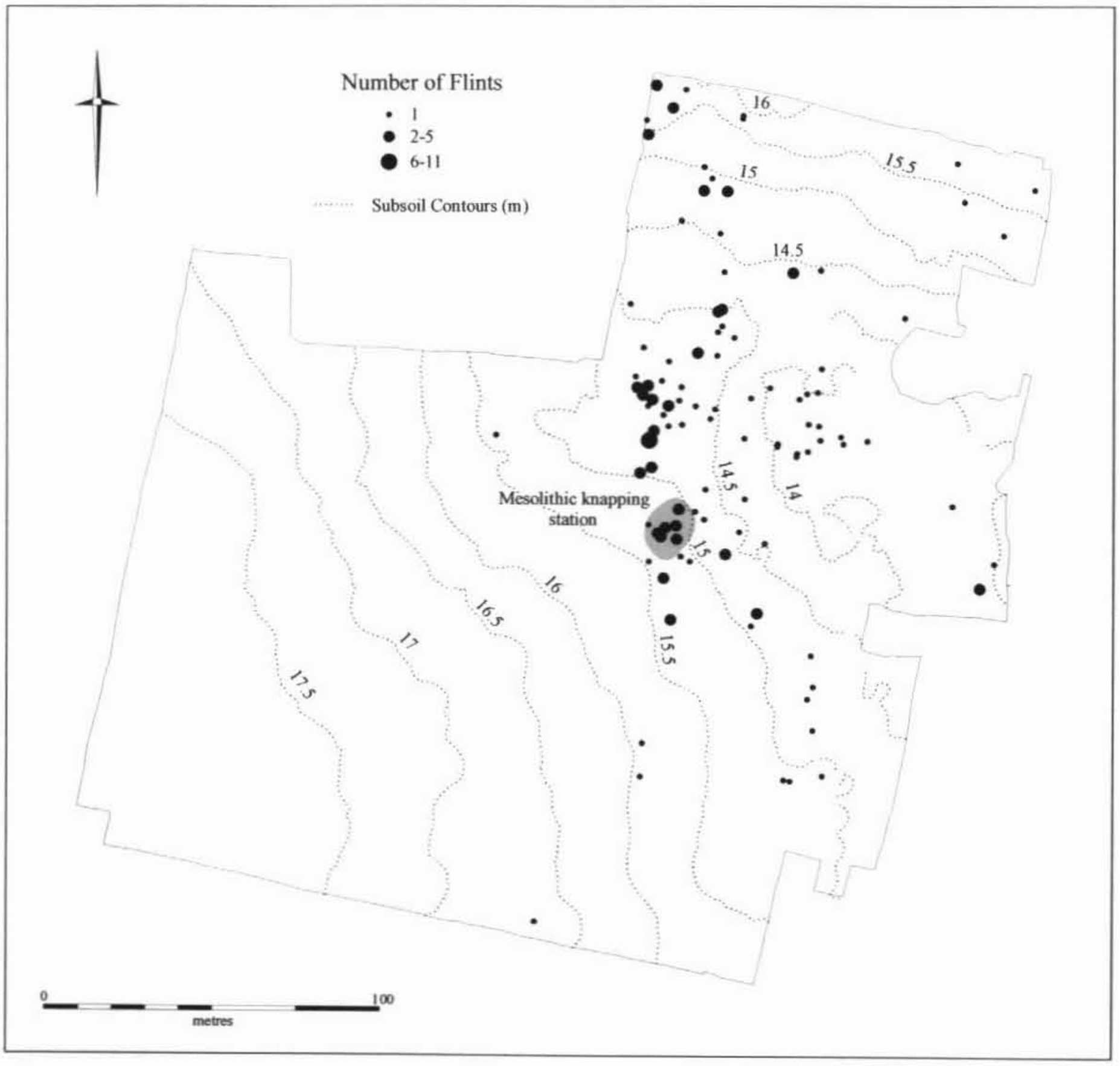

Number of Flints
1
2-5
6-11
Subsoil Contours (m)
16
15.5
15
14.5
14
Mesolithic knapping station
17.5
17
16.5
0
100
metres

FIG 1.7

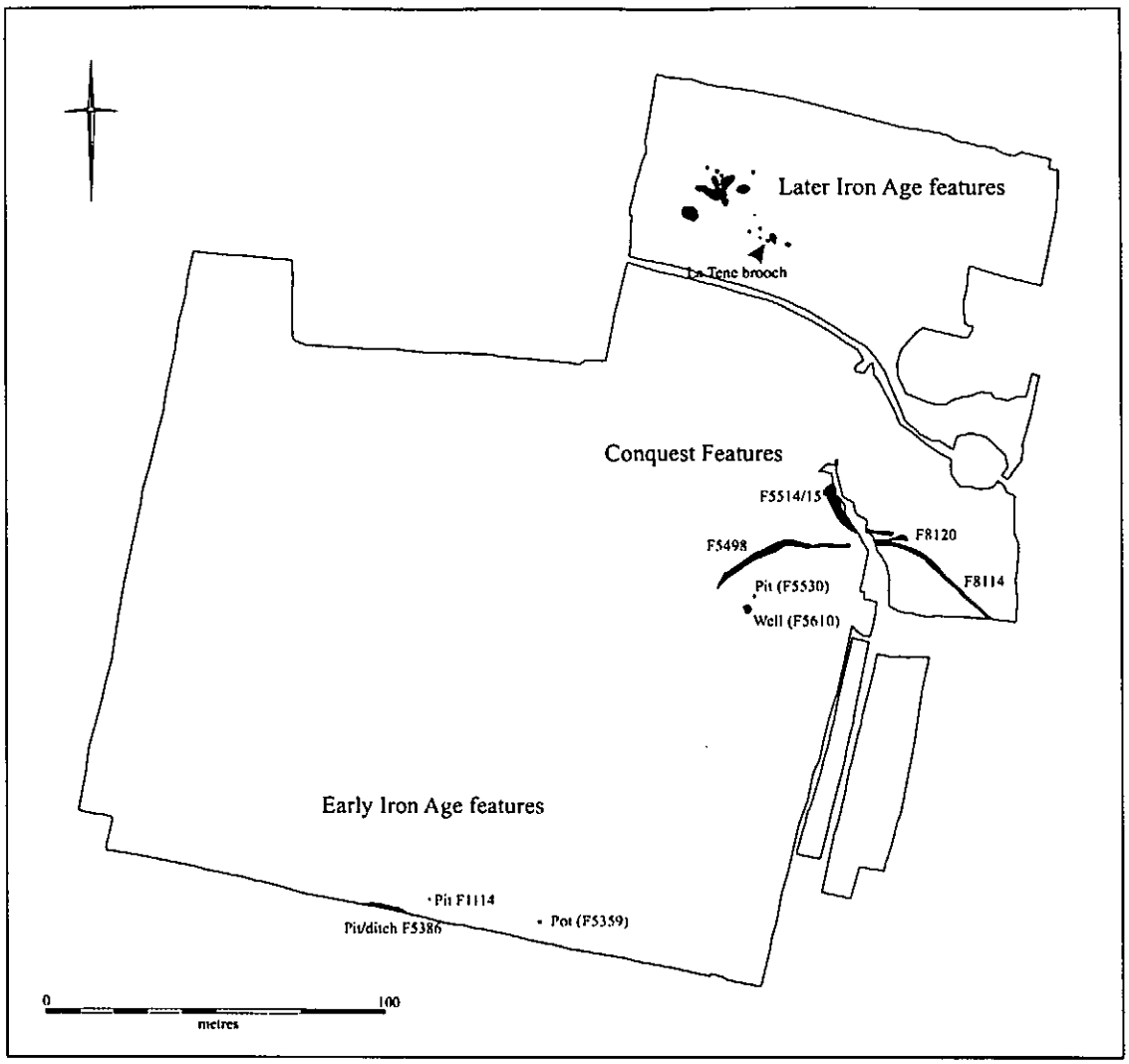

Later Iron Age features
La Tene brooch
Conquest Features
F5514/15
F8120
F5498
F8114
Pit (F5530)
Well (F5610)
Early Iron Age features
Pit F1114
Pit/ditch F5386
Pot (F5359)
0
100
metres

FIG 1.8

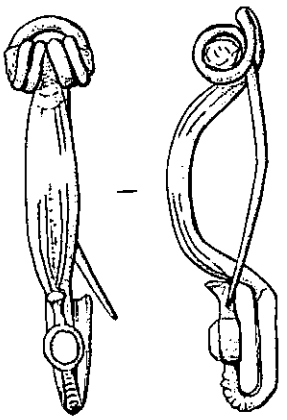


FIG 1.9

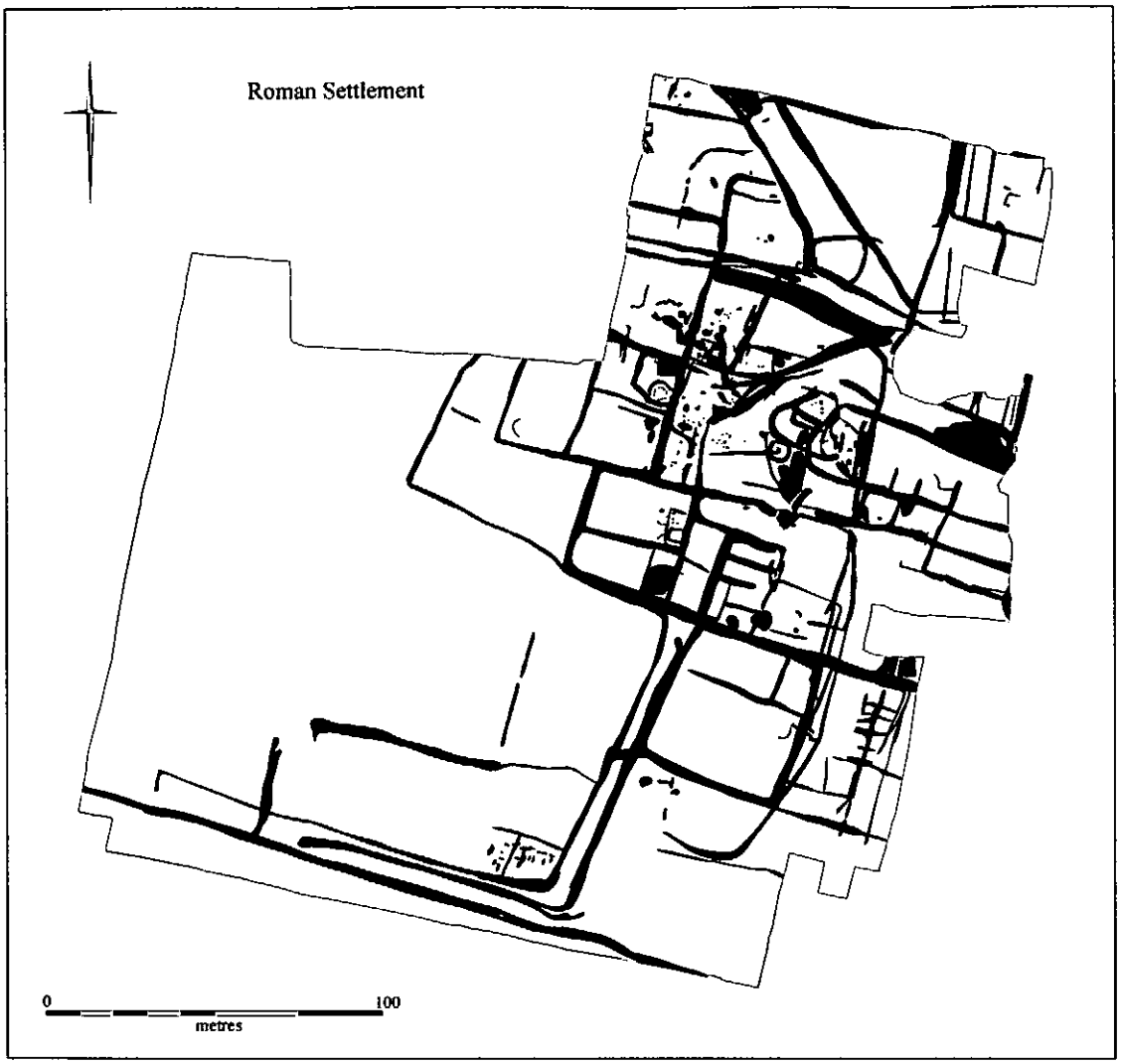


FIG 1·10

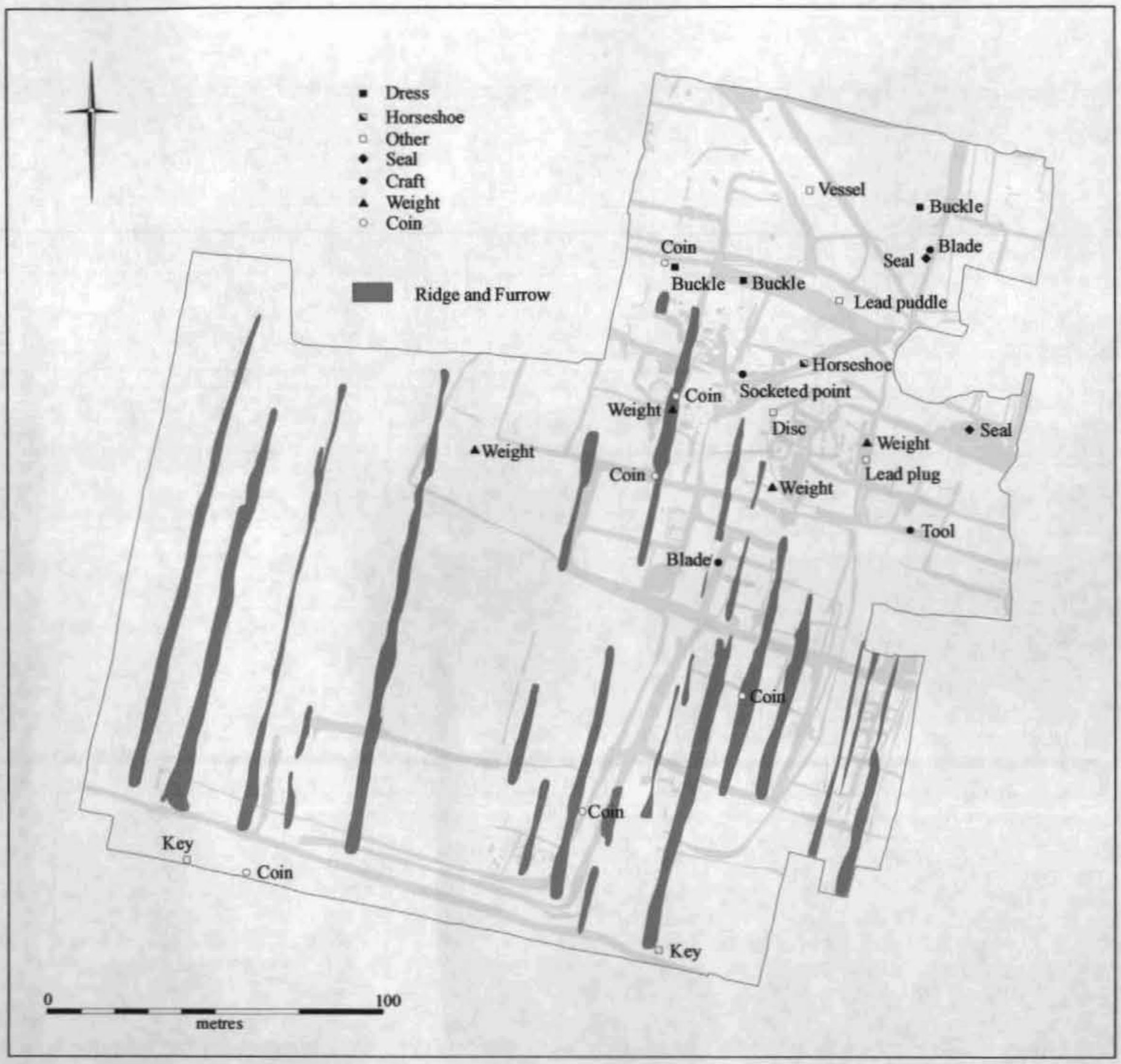

Dress
Horseshoe
Other
Seal
Craft
Weight
Coin
Ridge and Furrow
Vessel
Buckle
Blade
Seal
Coin
Buckle
Buckle
Lead puddle
Horseshoe
Socketed point
Coin
Weight
Disc
Seal
Weight
Weight
Lead plug
Coin
Weight
Tool
Blade
Coin
Coin
Key
Coin
Key
0
100
metres

FIG 1.11

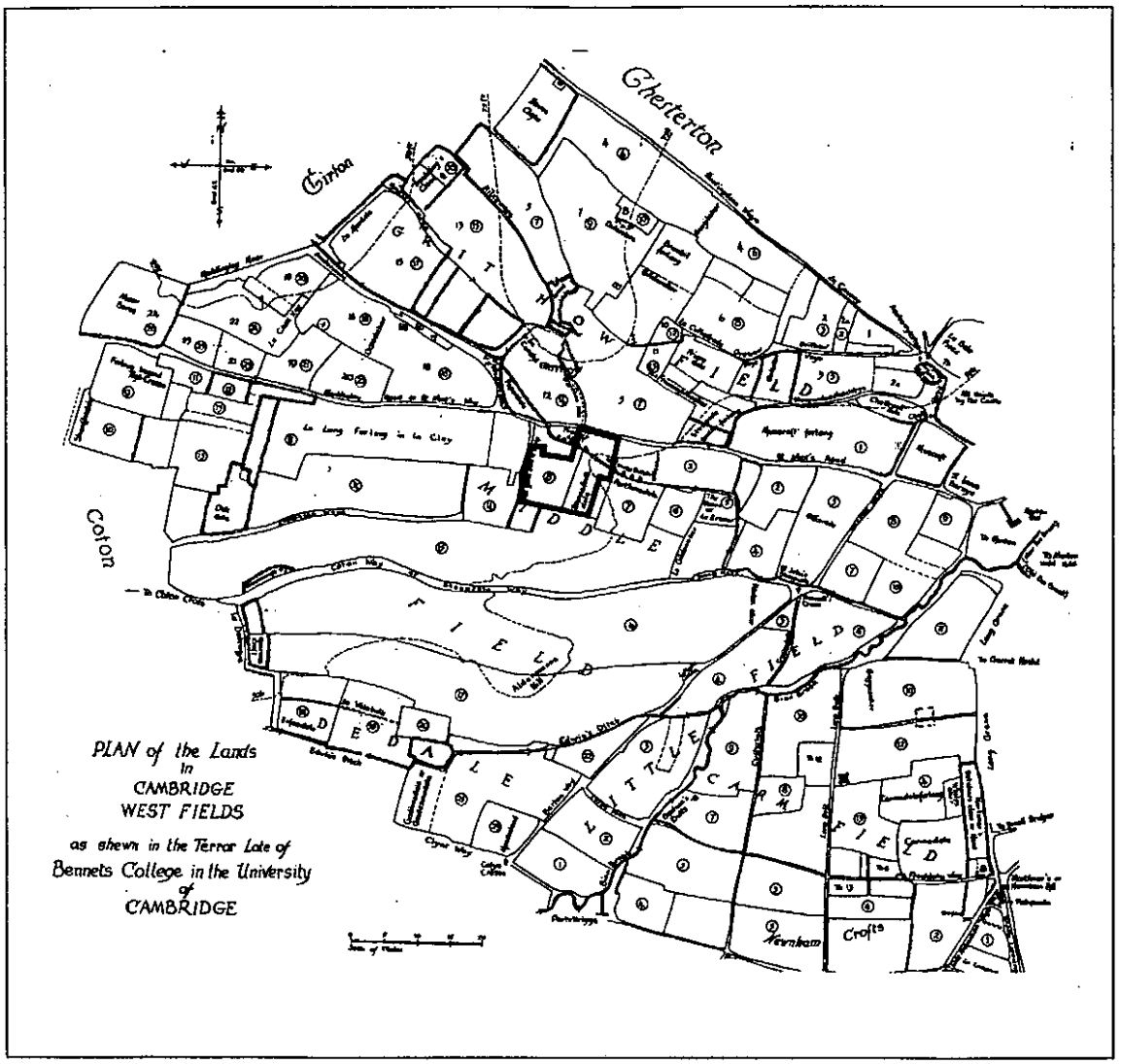

Chesterton
Girton
Coton
PLAN of the Lands
in
CAMBRIDGE
WEST FIELDS
as shewn in the Terrar Late of
Bennets College in the University
of
CAMBRIDGE

FIG 1.12.

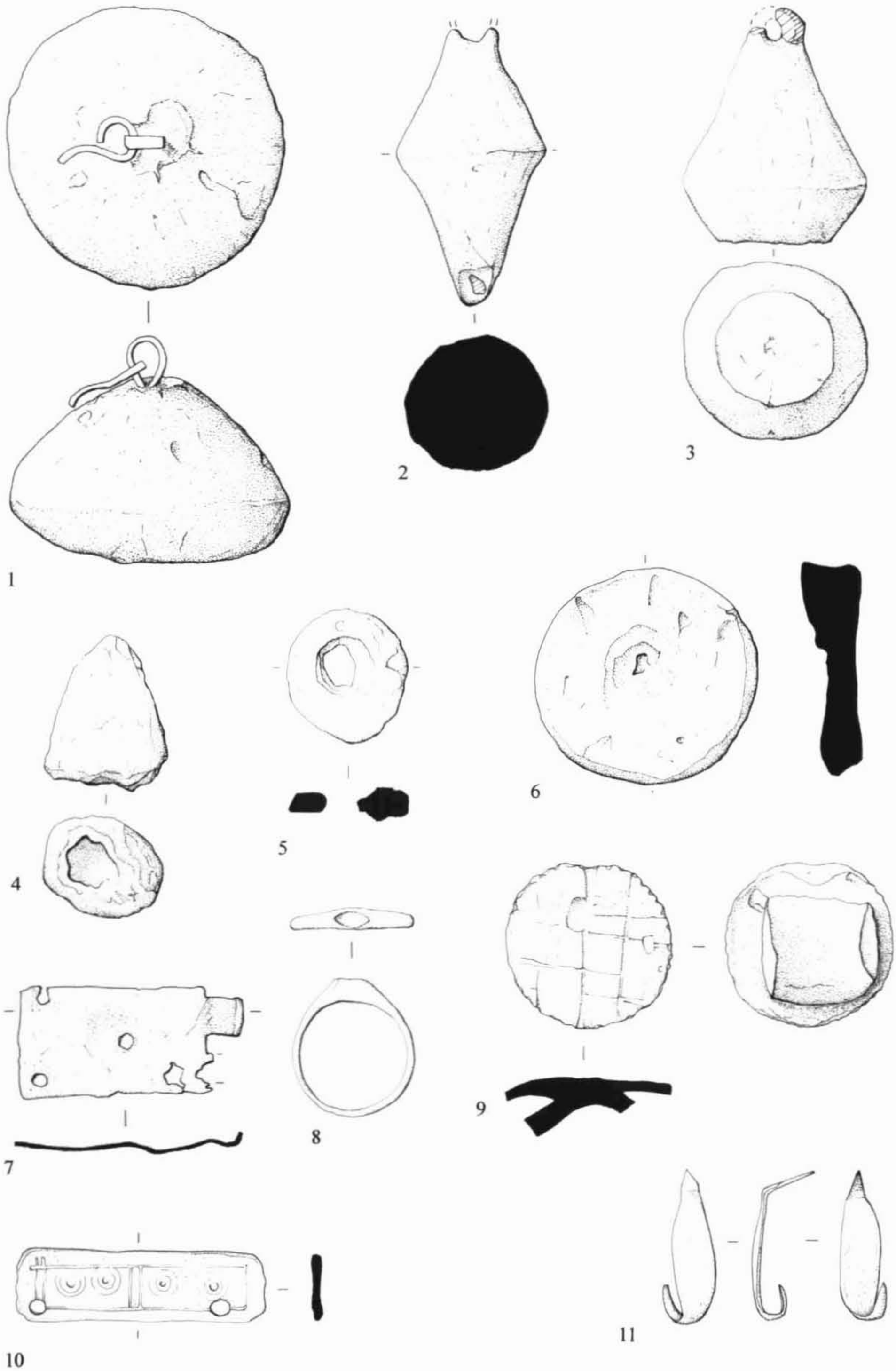


FIG 1·13

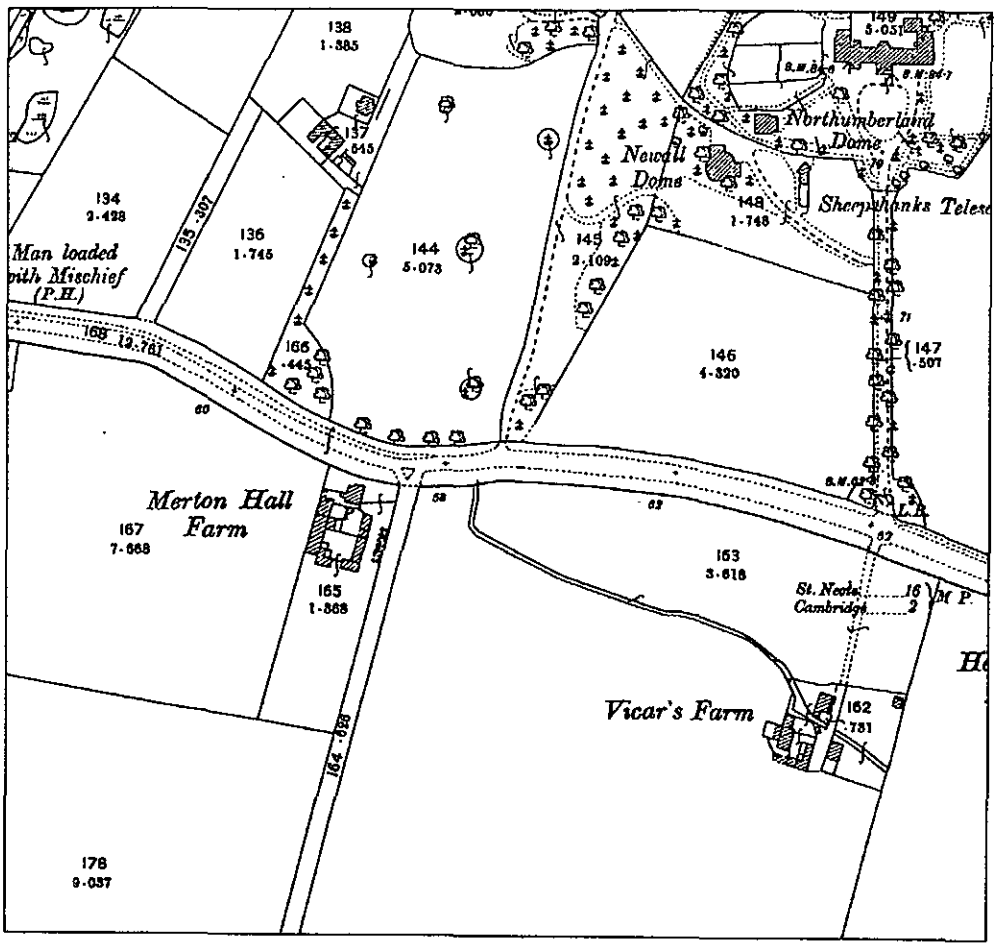
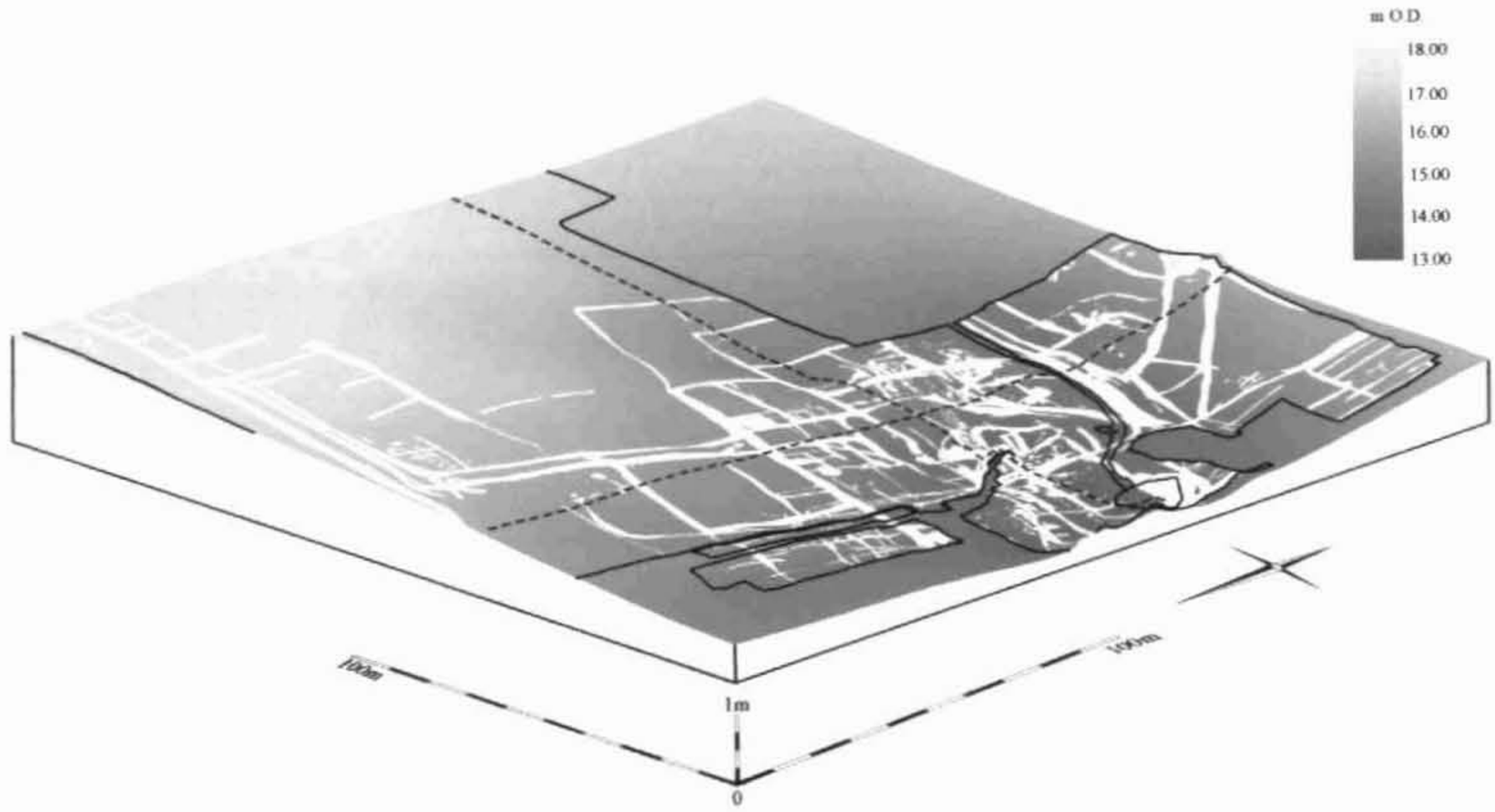
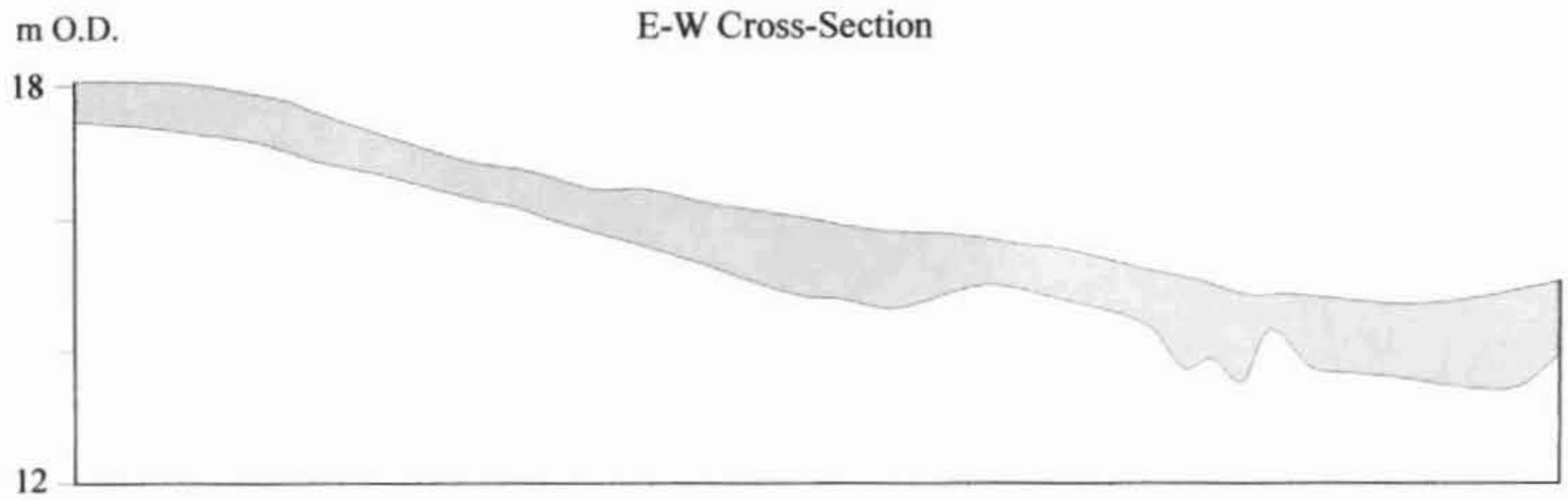
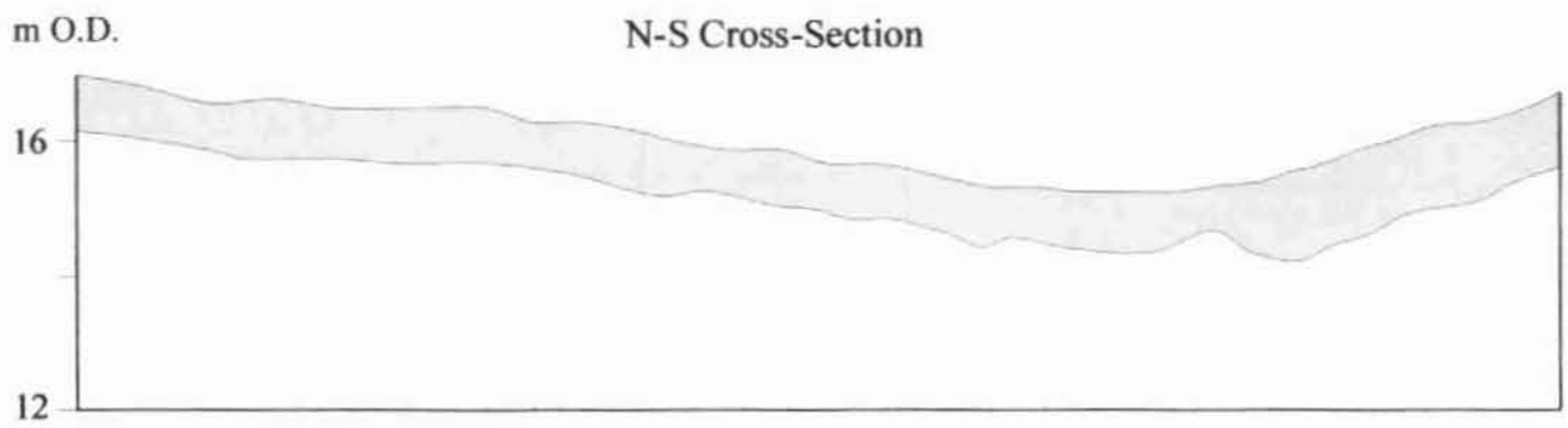

138
1·385
137
·545
134
2·428
Man loaded
with Mischief
(P.H.)
135 ·307
136
1·745
144
5·073
145
2·109½
Newall
Dome
Northumberland
Dome
148
1·748
149
5·051
146
4·320
147
·507
166
·445
169 12·761
Merton Hall
Farm
167
7·668
165
1·868
153
3·618
St. Neots 16
Cambridge 2
Vicar's Farm
162
·731
164 ·688
178
9·037

FIG 1.14.


m O.D.
18.00
17.00
16.00
15.00
14.00
13.00
100m
100m
1m
0


m O.D.
E-W Cross-Section
18
12


m O.D.
N-S Cross-Section
16
12

0 100m

FIG2.1

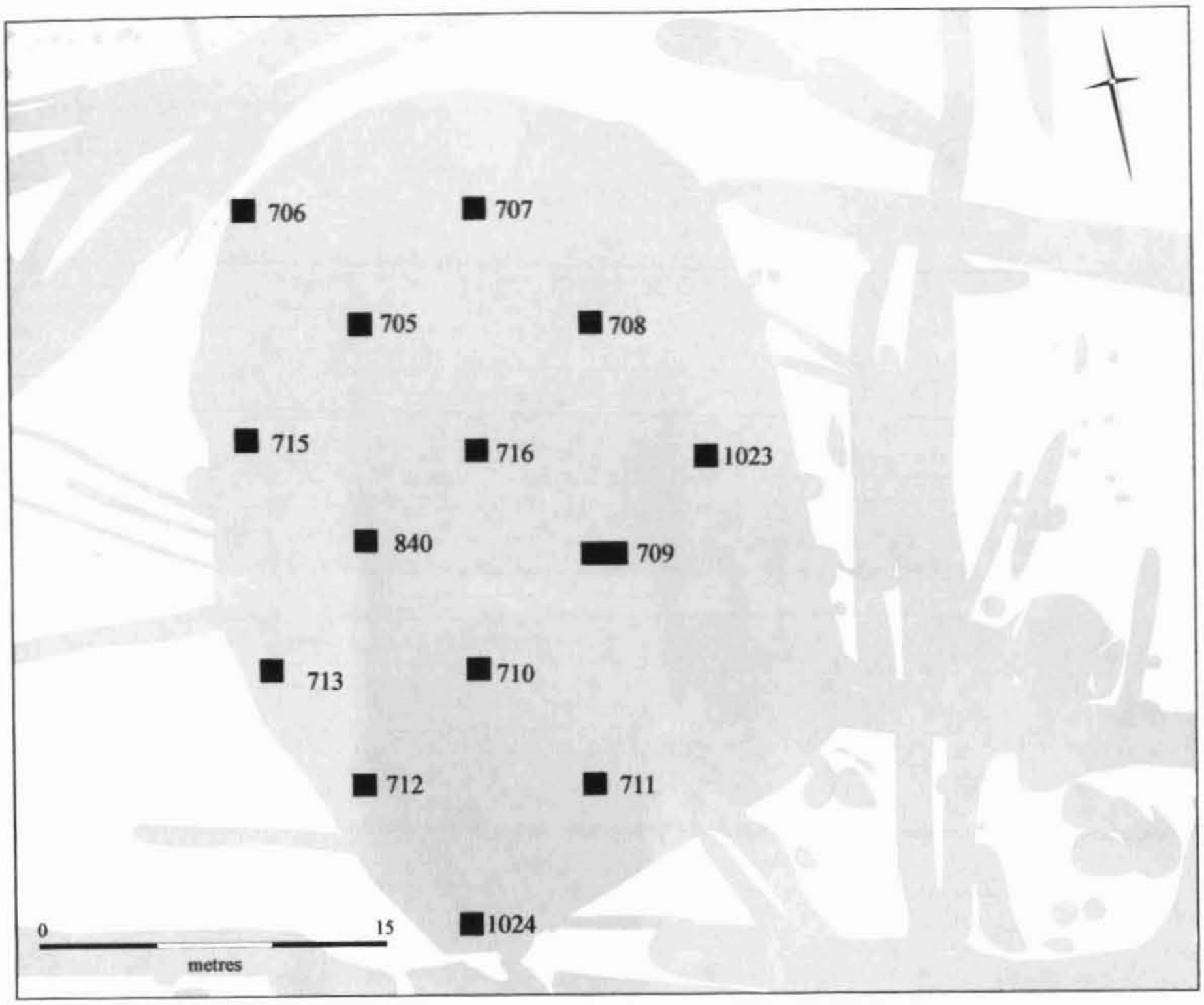

706
707
705
708
715
716
1023
840
709
713
710
712
711
1024
0
15
metres

FIG 2.2.

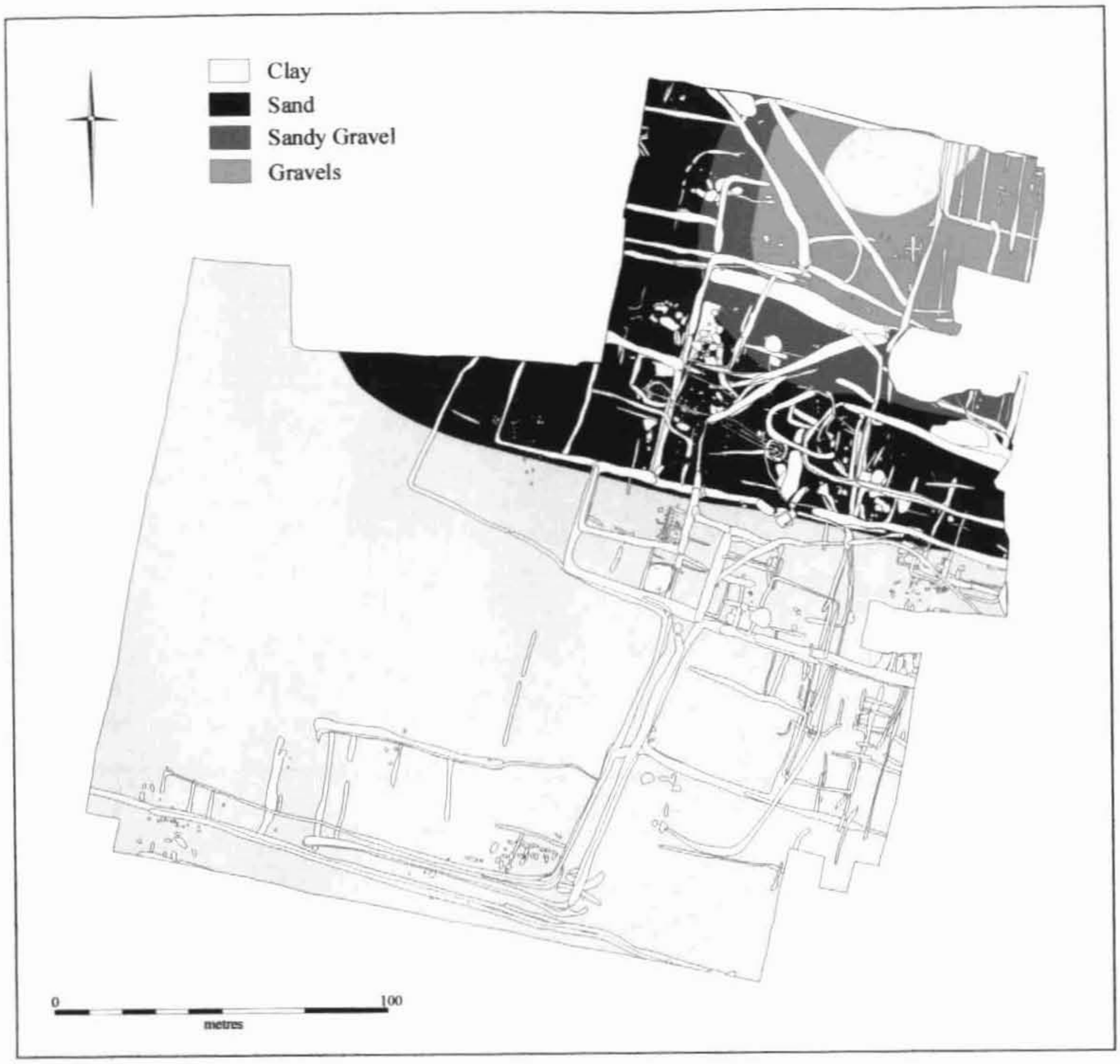


FIG 2.3

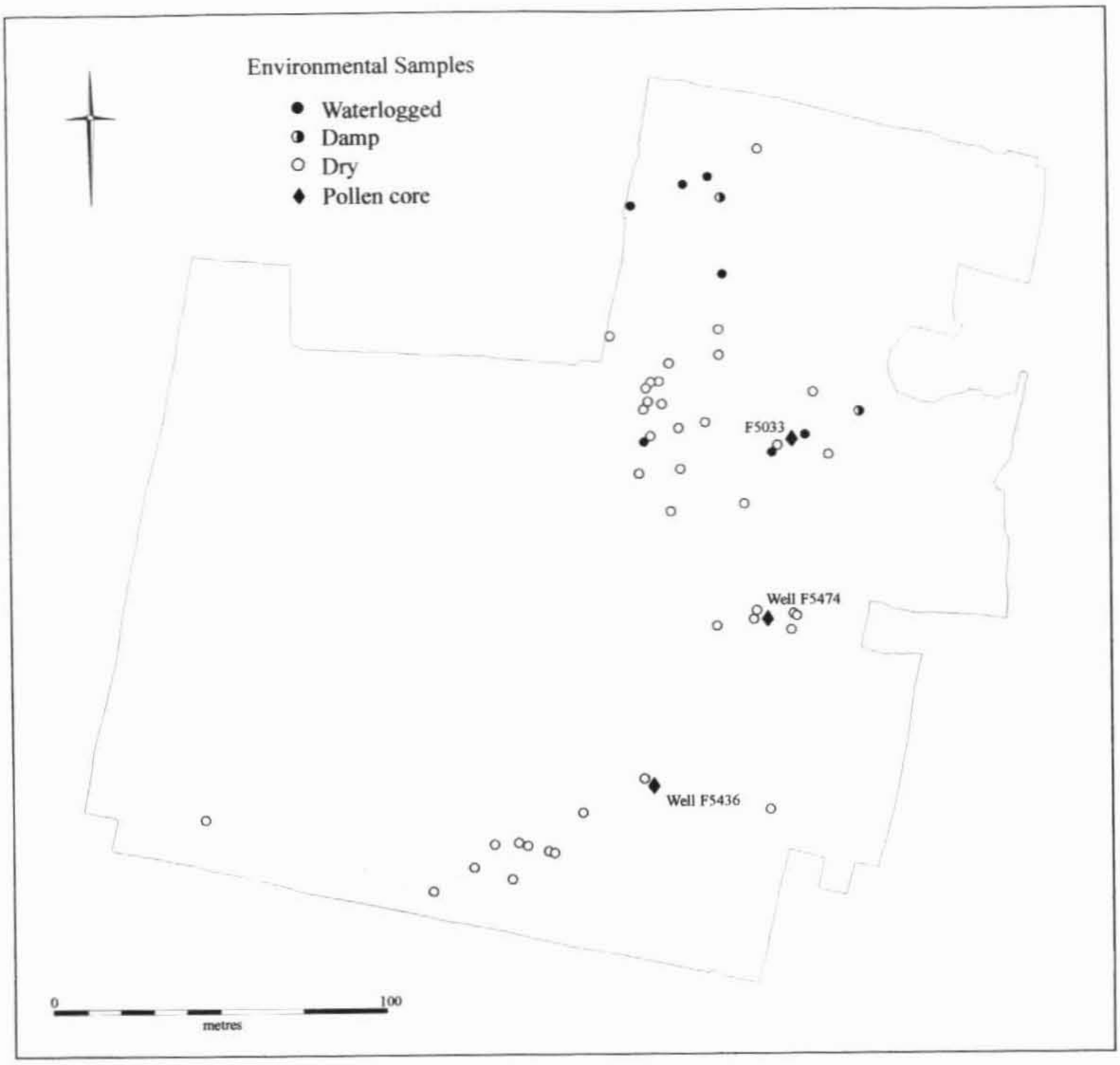

Environmental Samples
Waterlogged
Damp
Dry
Pollen core
F5033
Well F5474
Well F5436
0
100
metres

FIG 2.4

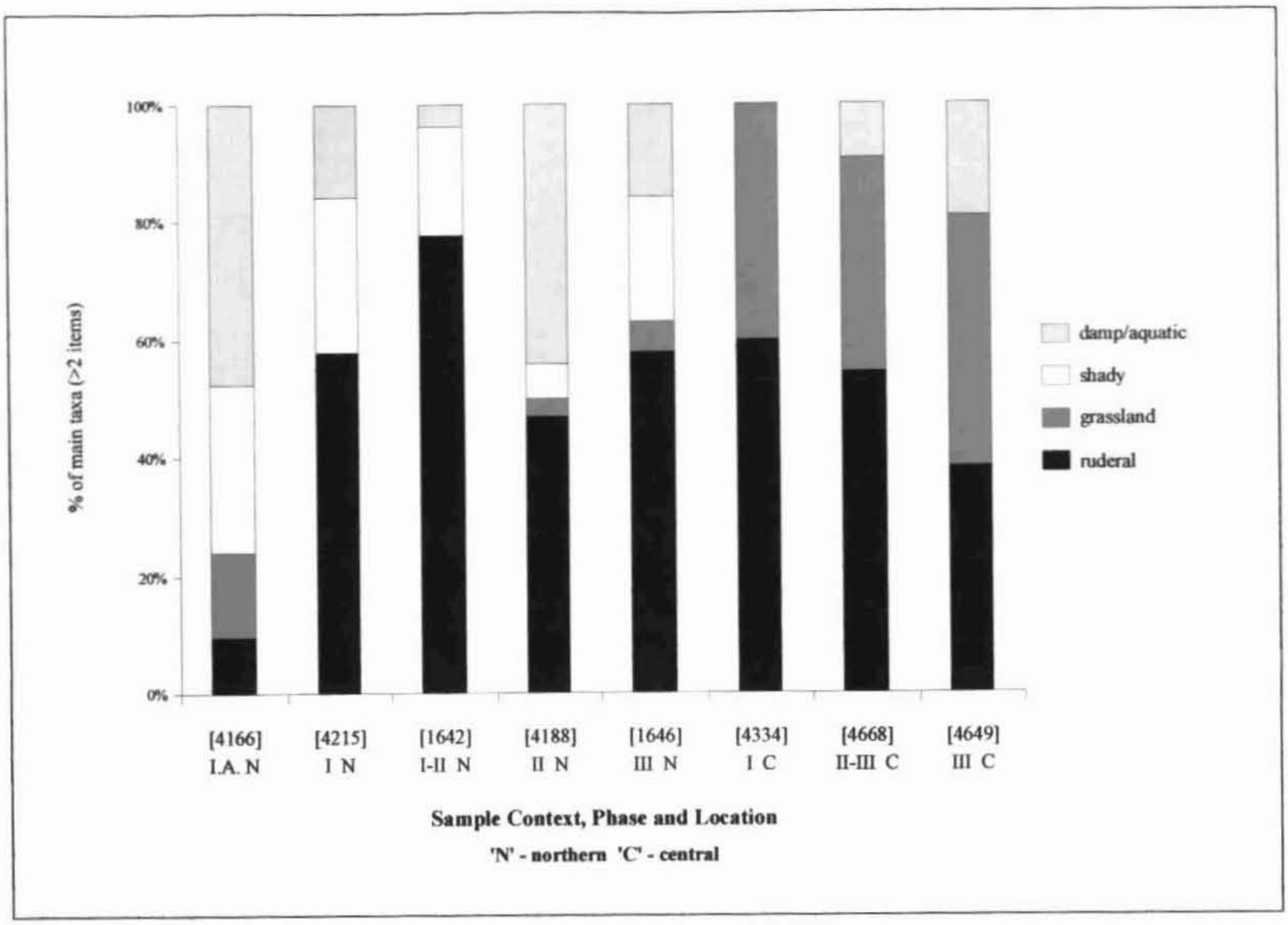

100%
80%
60%
40%
20%
0%
% of main taxa (>2 items)
damp/aquatic
shady
grassland
ruderal
[4166] I.A. N
[4215] I N
[1642] I-II N
[4188] II N
[1646] III N
[4334] I C
[4668] II-III C
[4649] III C
Sample Context, Phase and Location
'N' - northern 'C' - central

FIG 2.5

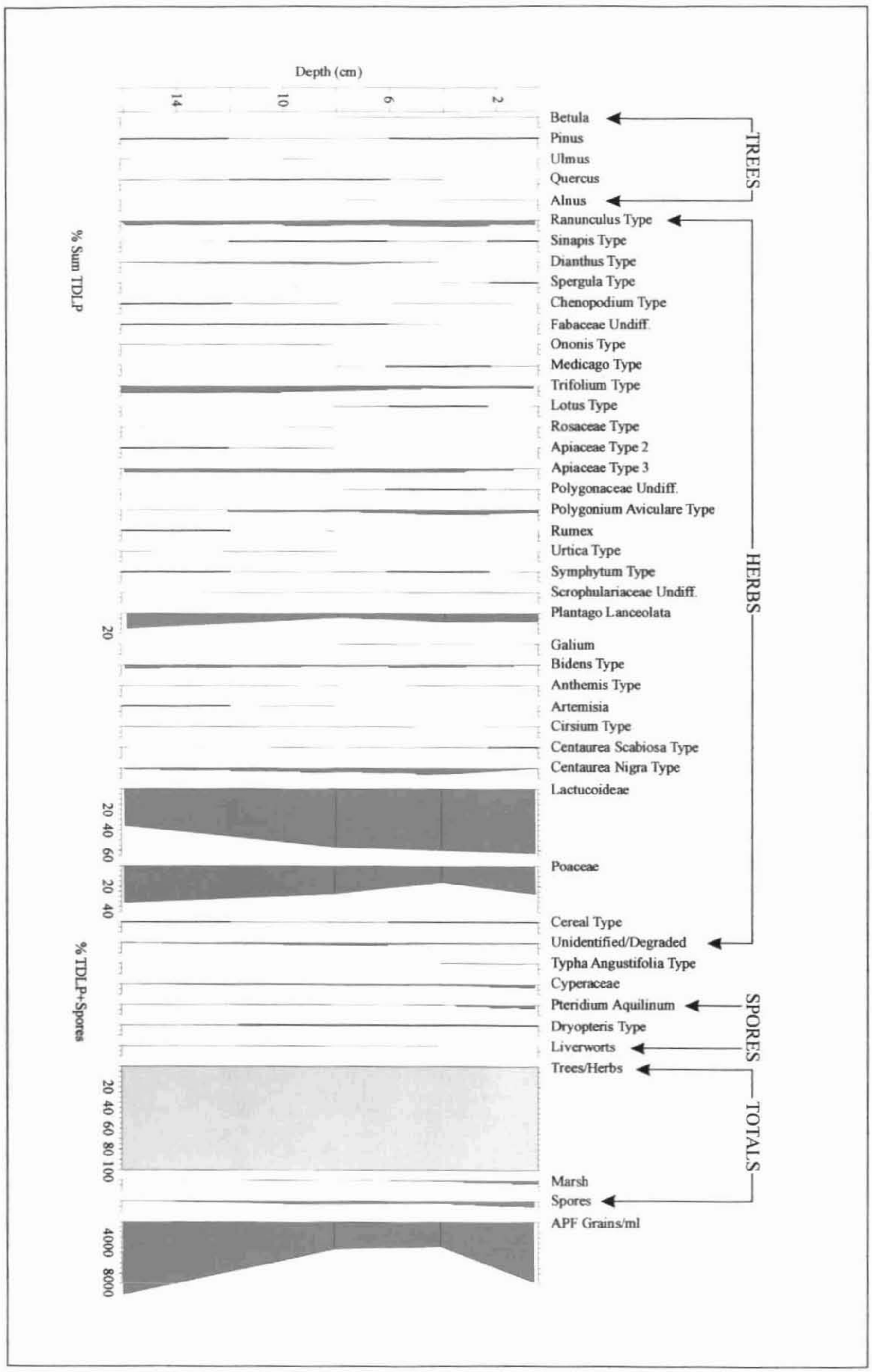

Depth (cm)
14
10
6
2
% Sum TDLP
20
Betula
Pinus
Ulmus
Quercus
Alnus
TREES
Ranunculus Type
Sinapis Type
Dianthus Type
Spergula Type
Chenopodium Type
Fabaceae Undiff.
Ononis Type
Medicago Type
Trifolium Type
Lotus Type
Rosaceae Type
Apiaceae Type 2
Apiaceae Type 3
Polygonaceae Undiff.
Polygonium Aviculare Type
Rumex
Urtica Type
Symphytum Type
Scrophulariaceae Undiff.
Plantago Lanceolata
Galium
Bidens Type
Anthemis Type
Artemisia
Cirsium Type
Centaurea Scabiosa Type
Centaurea Nigra Type
Lactucoideae
HERBS
20 40 60
Poaceae
20 40
Cereal Type
Unidentified/Degraded
% TDLP+Spores
Typha Angustifolia Type
Cyperaceae
Pteridium Aquilinum
Dryopteris Type
Liverworts
SPORES
Trees/Herbs
20 40 60 80 100
TOTALS
Marsh
Spores
4000 8000
APF Grains/ml

FIG 2.6

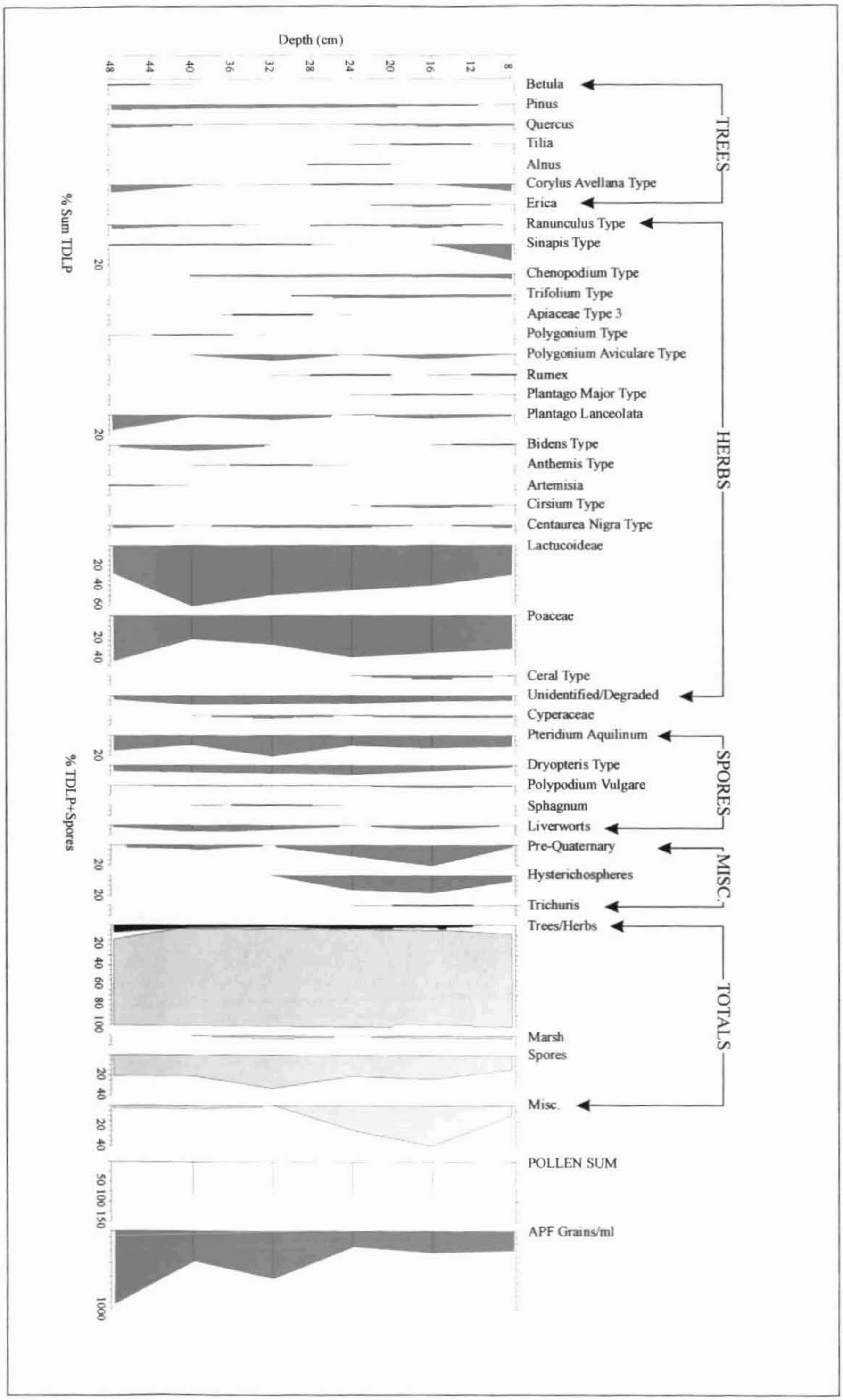

Depth (cm)
% Sum TDLP
% TDLP+Spores
Betula
Pinus
Quercus
Tilia
Alnus
Corylus Avellana Type
Erica
Ranunculus Type
Sinapis Type
Chenopodium Type
Trifolium Type
Apiaceae Type 3
Polygonium Type
Polygonium Aviculare Type
Rumex
Plantago Major Type
Plantago Lanceolata
Bidens Type
Anthemis Type
Artemisia
Cirsium Type
Centaurea Nigra Type
Lactucoideae
Poaceae
Ceral Type
Unidentified/Degraded
Cyperaceae
Pteridium Aquilinum
Dryopteris Type
Polypodium Vulgare
Sphagnum
Liverworts
Pre-Quaternary
Hysterichospheres
Trichuris
Trees/Herbs
Marsh
Spores
Misc.
POLLEN SUM
APF Grains/ml
TREES
HERBS
SPORES
MISC.
TOTALS

FIG 2.7

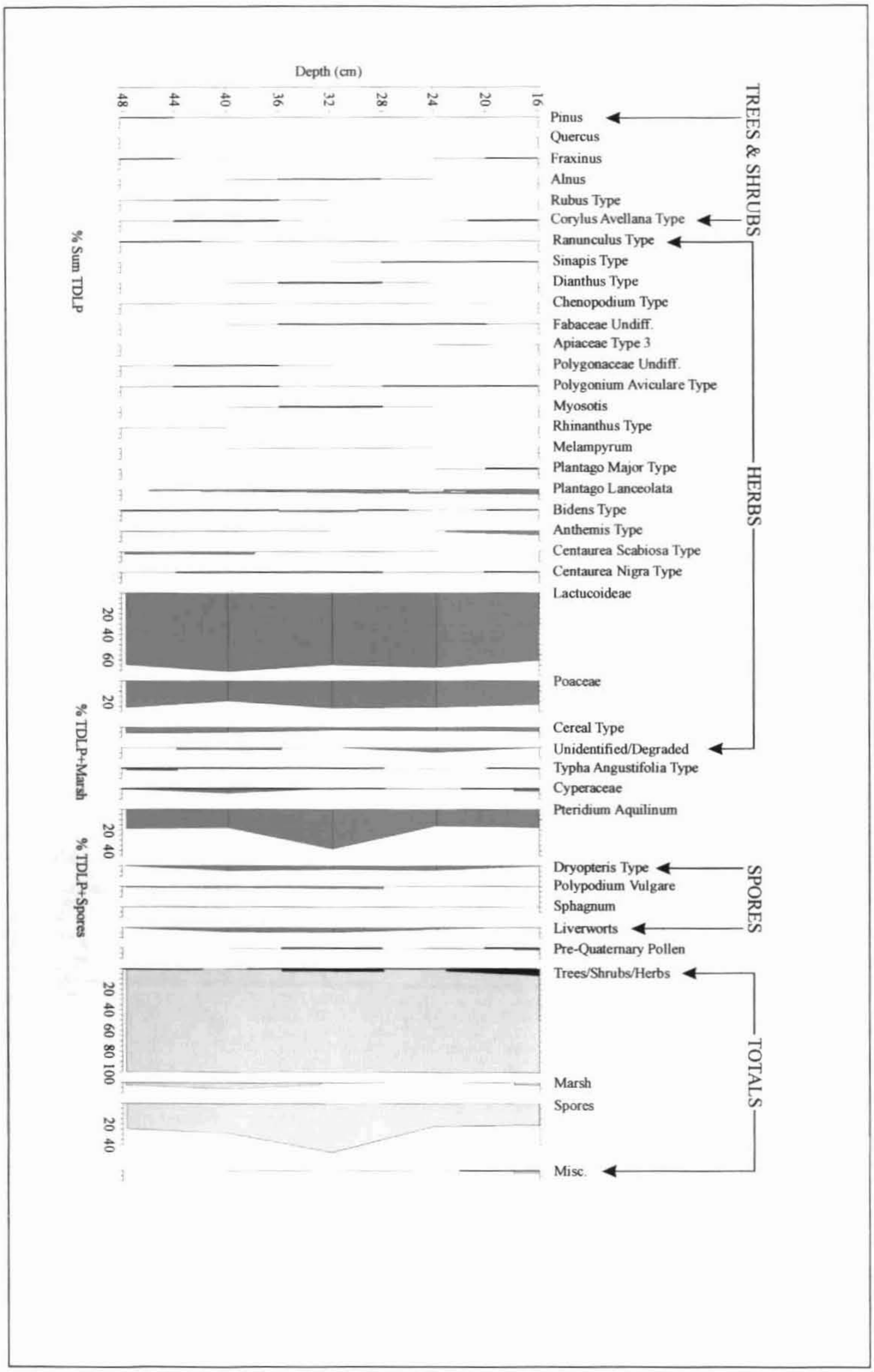

Depth (cm)
16
20
24
28
32
36
40
44
48
% Sum TDLP
% TDLP+Marsh
% TDLP+Spores
Pinus
Quercus
Fraxinus
Alnus
Rubus Type
Corylus Avellana Type
Ranunculus Type
Sinapis Type
Dianthus Type
Chenopodium Type
Fabaceae Undiff.
Apiaceae Type 3
Polygonaceae Undiff.
Polygonium Aviculare Type
Myosotis
Rhinanthus Type
Melampyrum
Plantago Major Type
Plantago Lanceolata
Bidens Type
Anthemis Type
Centaurea Scabiosa Type
Centaurea Nigra Type
Lactucoideae
Poaceae
Cereal Type
Unidentified/Degraded
Typha Angustifolia Type
Cyperaceae
Pteridium Aquilinum
Dryopteris Type
Polypodium Vulgare
Sphagnum
Liverworts
Pre-Quaternary Pollen
Trees/Shrubs/Herbs
Marsh
Spores
Misc.
TREES & SHRUBS
HERBS
SPORES
TOTALS

FIG 2.8

FIG 2.9

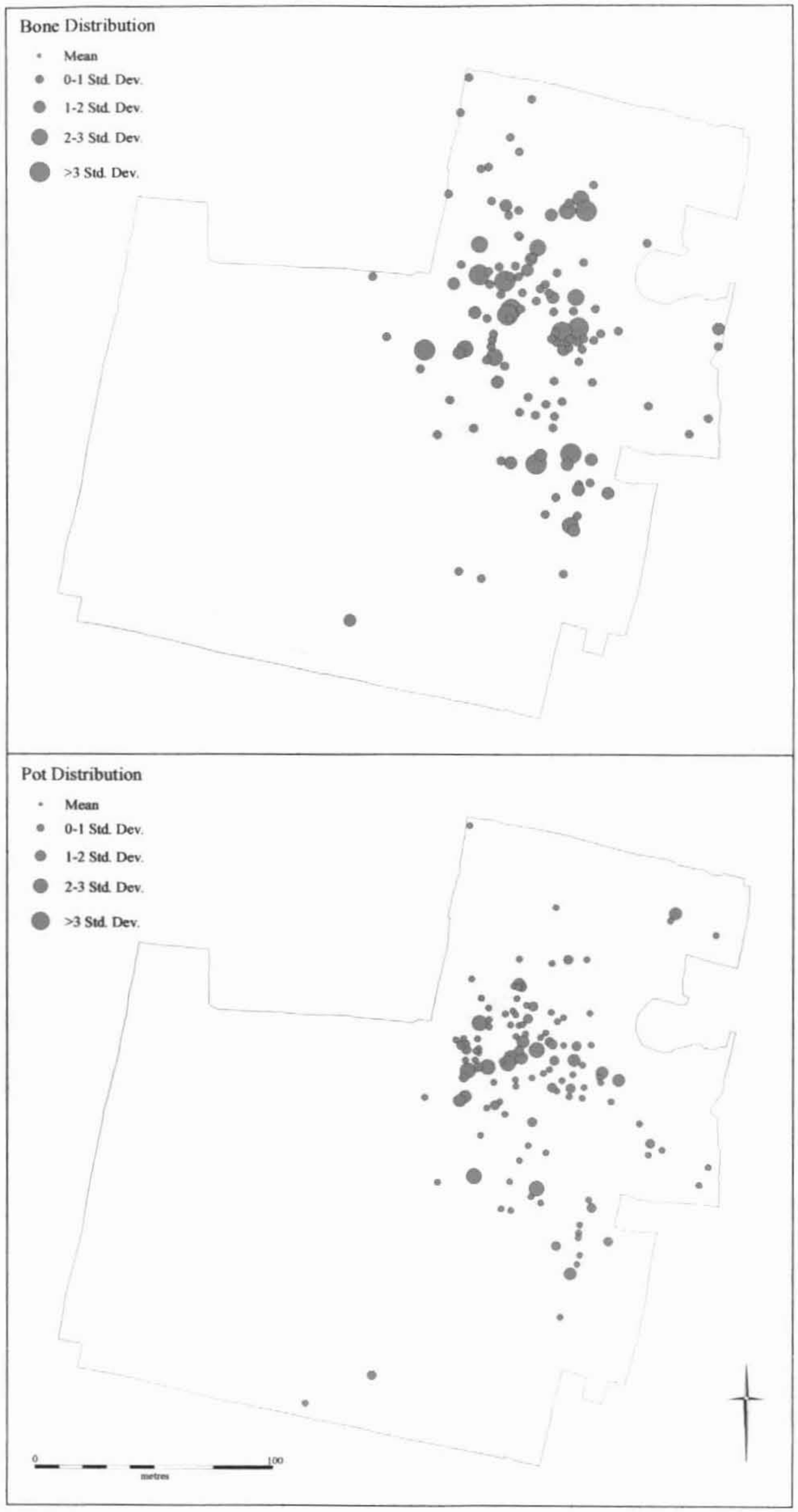

Bone Distribution
Mean
0-1 Std. Dev.
1-2 Std. Dev.
2-3 Std. Dev.
>3 Std. Dev.
Pot Distribution
Mean
0-1 Std. Dev.
1-2 Std. Dev.
2-3 Std. Dev.
>3 Std. Dev.
0
100
metres

FIG 2.10

FIG 2.11

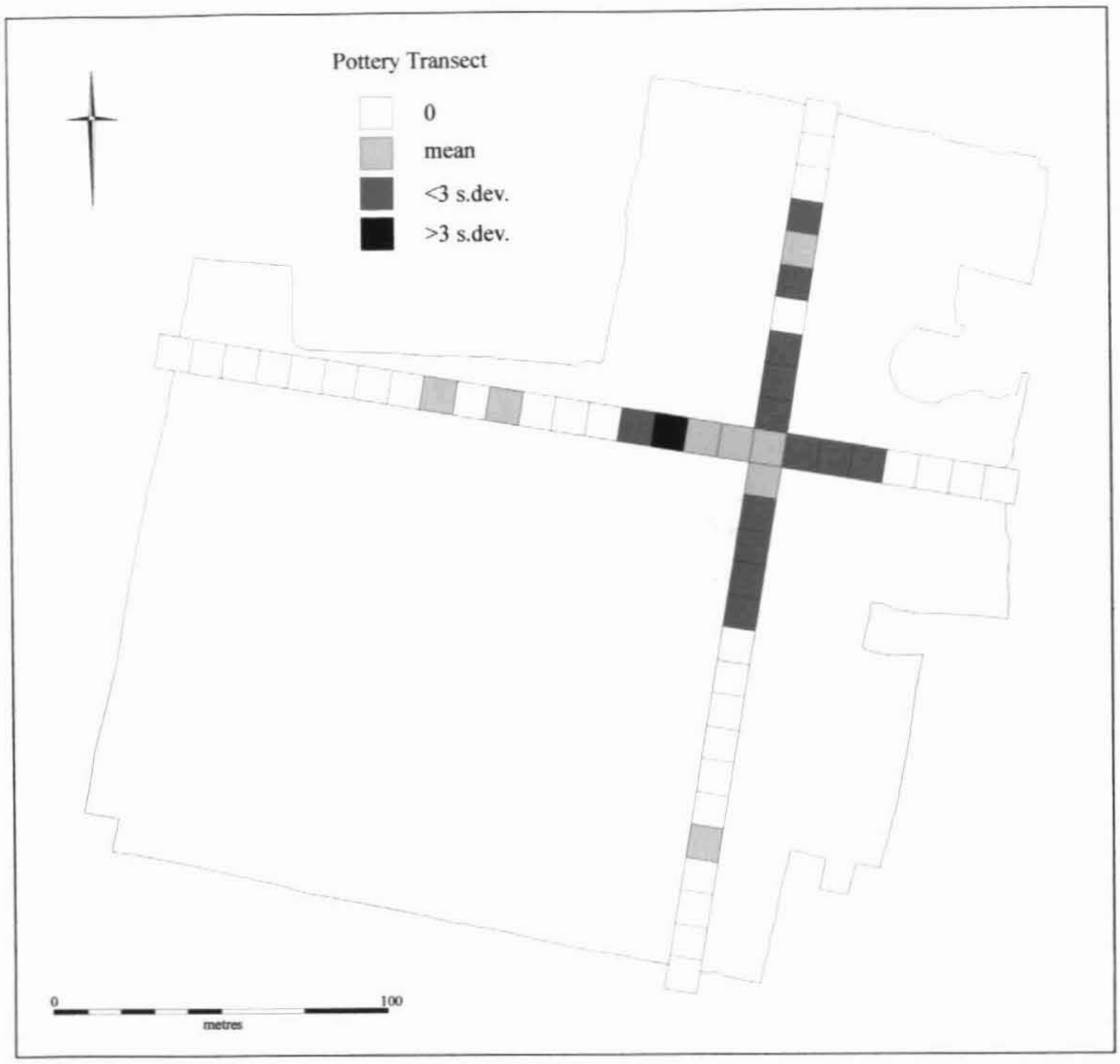


FIG 2.12

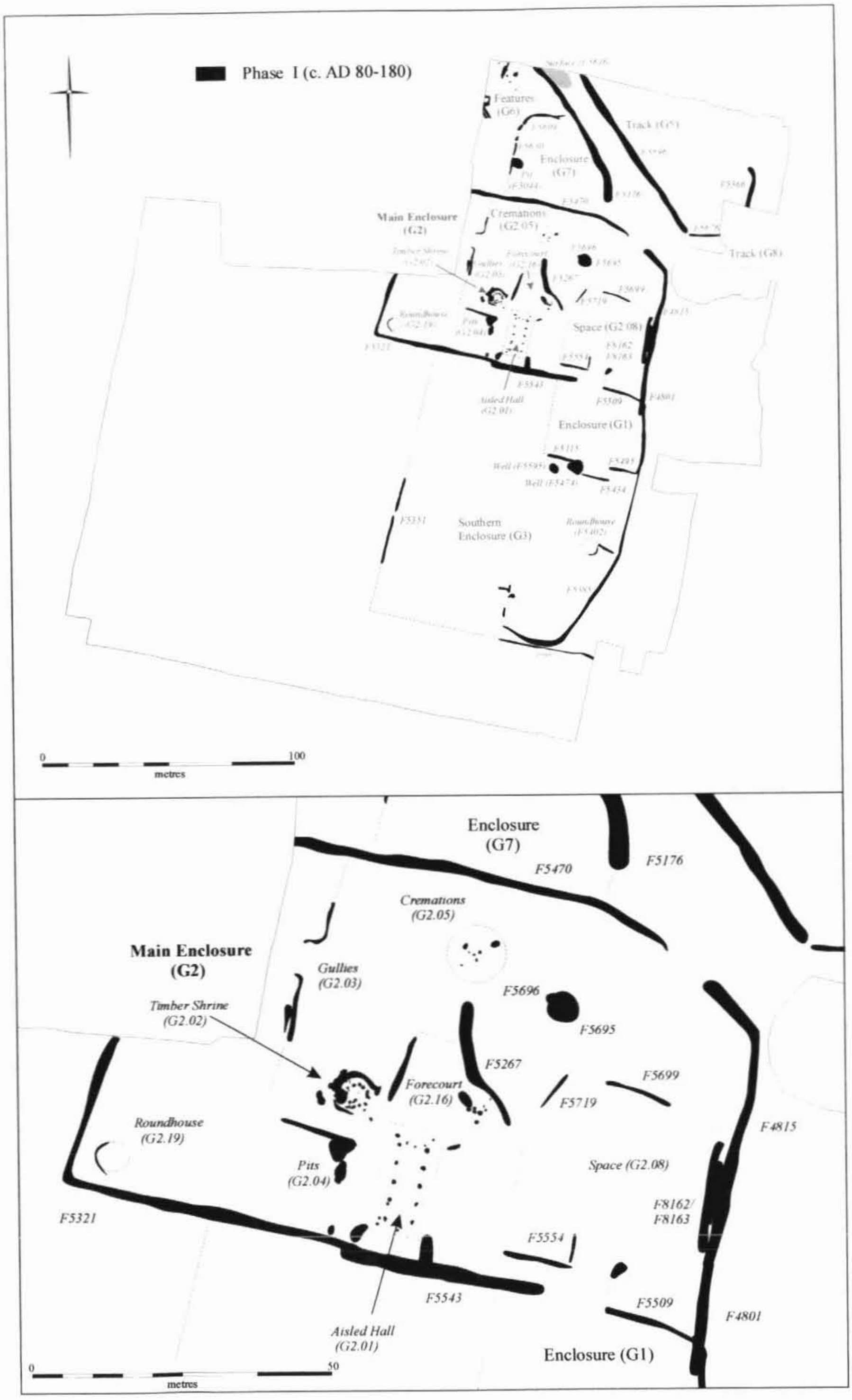
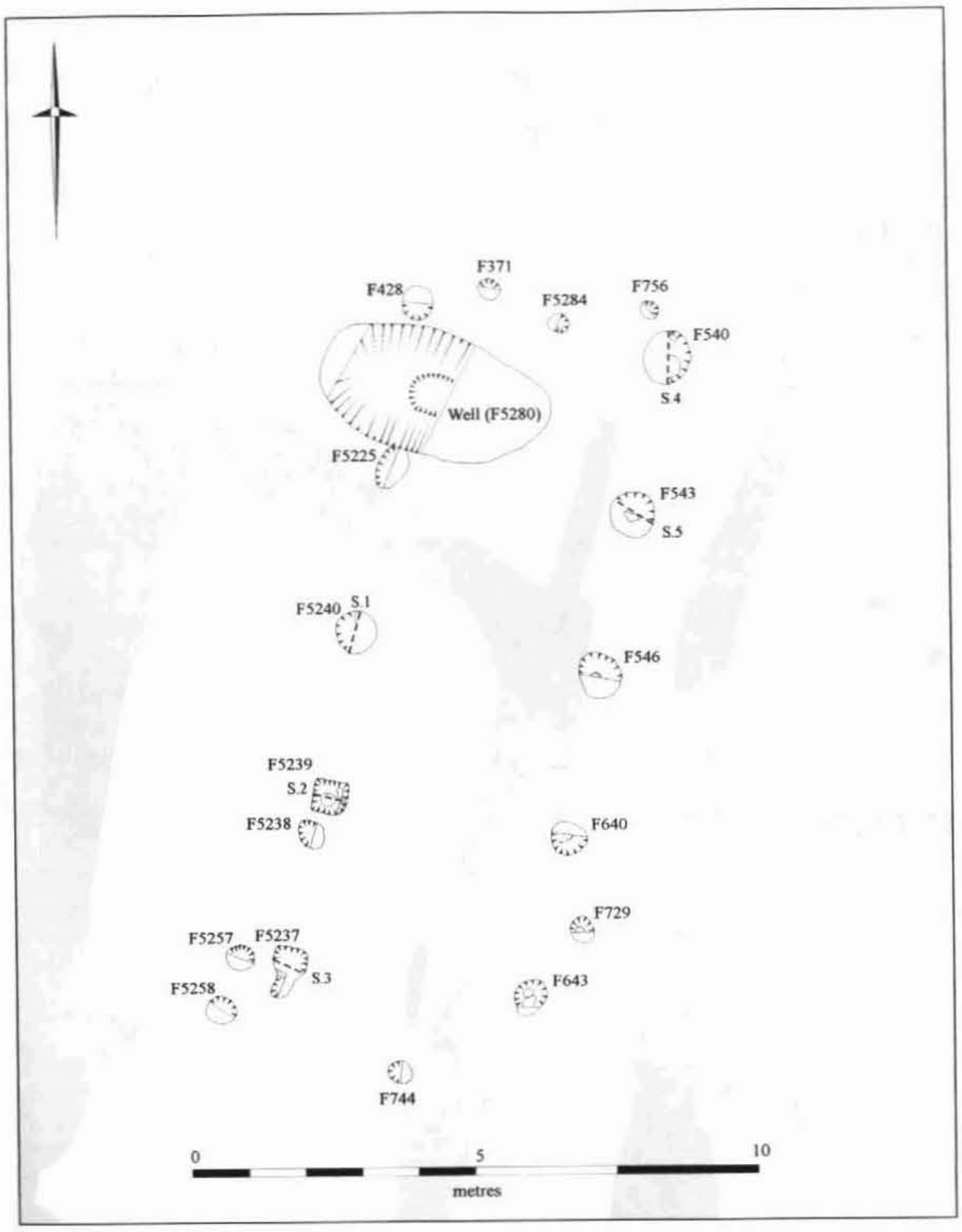

Phase I (c. AD 80-180)
Features (G6)
Track (G5)
Enclosure (G7)
Main Enclosure (G2)
Cremations (G2.05)
Track (G8)
Space (G2.08)
Aisled Hall (G2.01)
Enclosure (G1)
Southern Enclosure (G3)
0
100
metres
Enclosure (G7)
F5470
F5176
Cremations (G2.05)
Main Enclosure (G2)
Gullies (G2.03)
F5696
Timber Shrine (G2.02)
F5695
F5267
F5699
Forecourt (G2.16)
F5719
Roundhouse (G2.19)
F4815
Pits (G2.04)
Space (G2.08)
F8162/ F8163
F5321
F5554
F5543
F5509
F4801
Aisled Hall (G2.01)
Enclosure (G1)
0
50
metres

FIG 3.1


F371
F428
F5284
F756
F540
S.4
Well (F5280)
F5225
F543
S.5
F5240
S.1
F546
F5239
S.2
F5238
F640
F729
F5257
F5237
S.3
F5258
F643
F744
0
5
10
metres

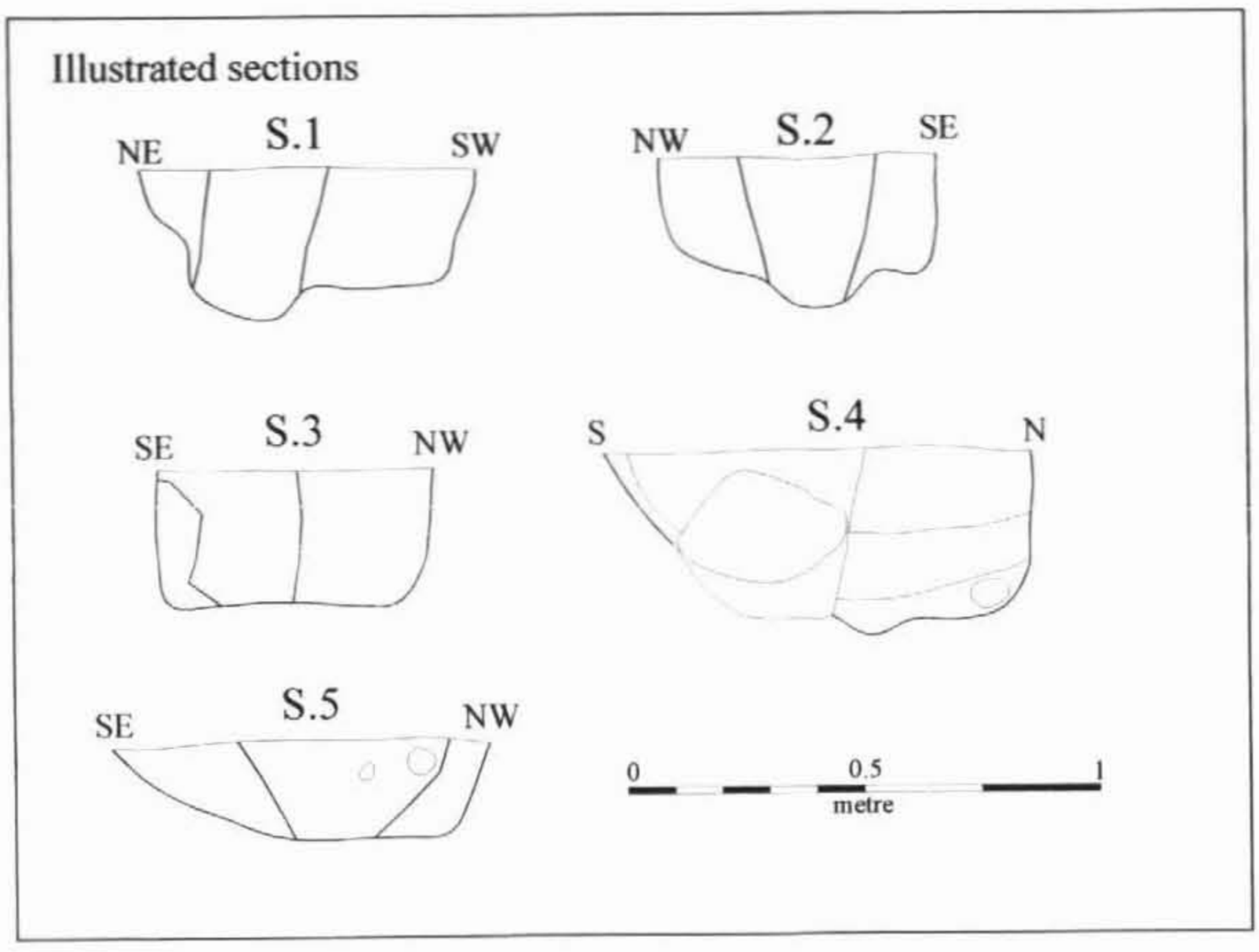

Illustrated sections
NE
S.1
SW
NW
S.2
SE
SE
S.3
NW
S
S.4
N
SE
S.5
NW
0
0.5
1
metre

FIG 3.2.

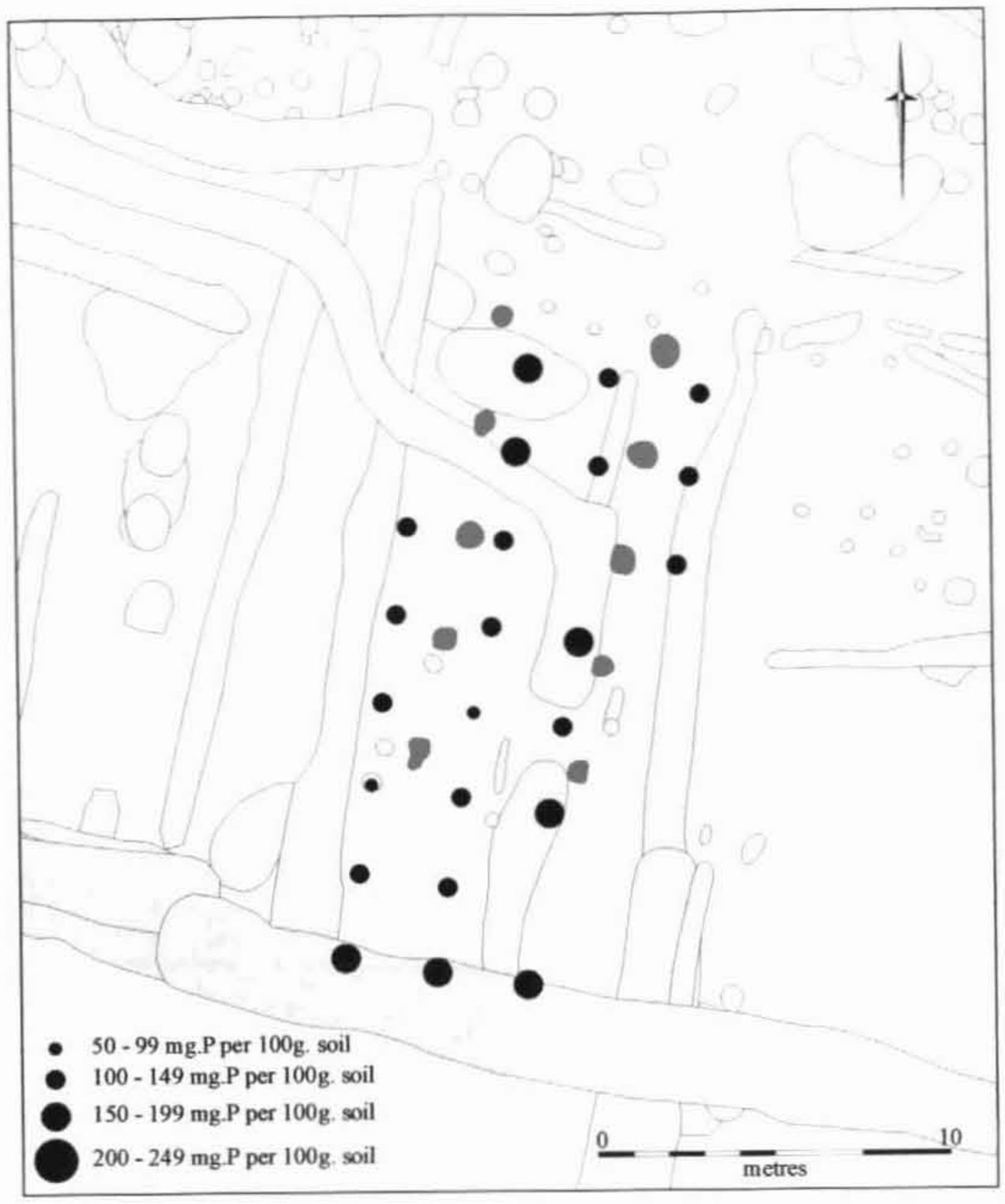
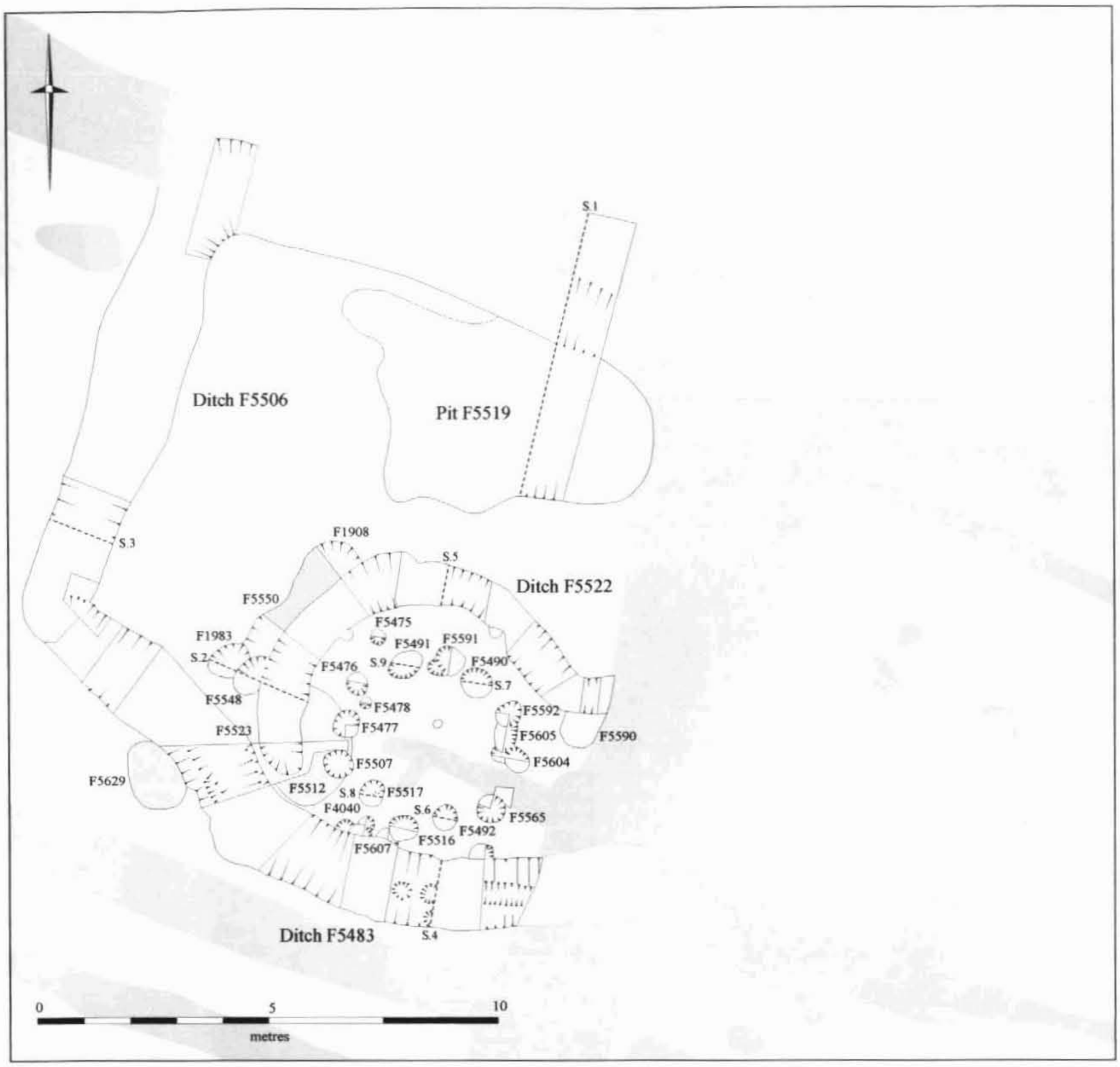

50 - 99 mg.P per 100g. soil
100 - 149 mg.P per 100g. soil
150 - 199 mg.P per 100g. soil
200 - 249 mg.P per 100g. soil
0
10
metres

FIG 3.3


S.1
Ditch F5506
Pit F5519
S.3
F1908
S.5
Ditch F5522
F5550
F5475
F1983
F5491
F5591
S.2
F5476
S.9
F5490
S.7
F5548
F5478
F5592
F5477
F5605
F5590
F5523
F5507
F5604
F5629
F5512
S.8
F5517
F4040
S.6
F5565
F5492
F5516
F5607
Ditch F5483
S.4
0
5
10
metres

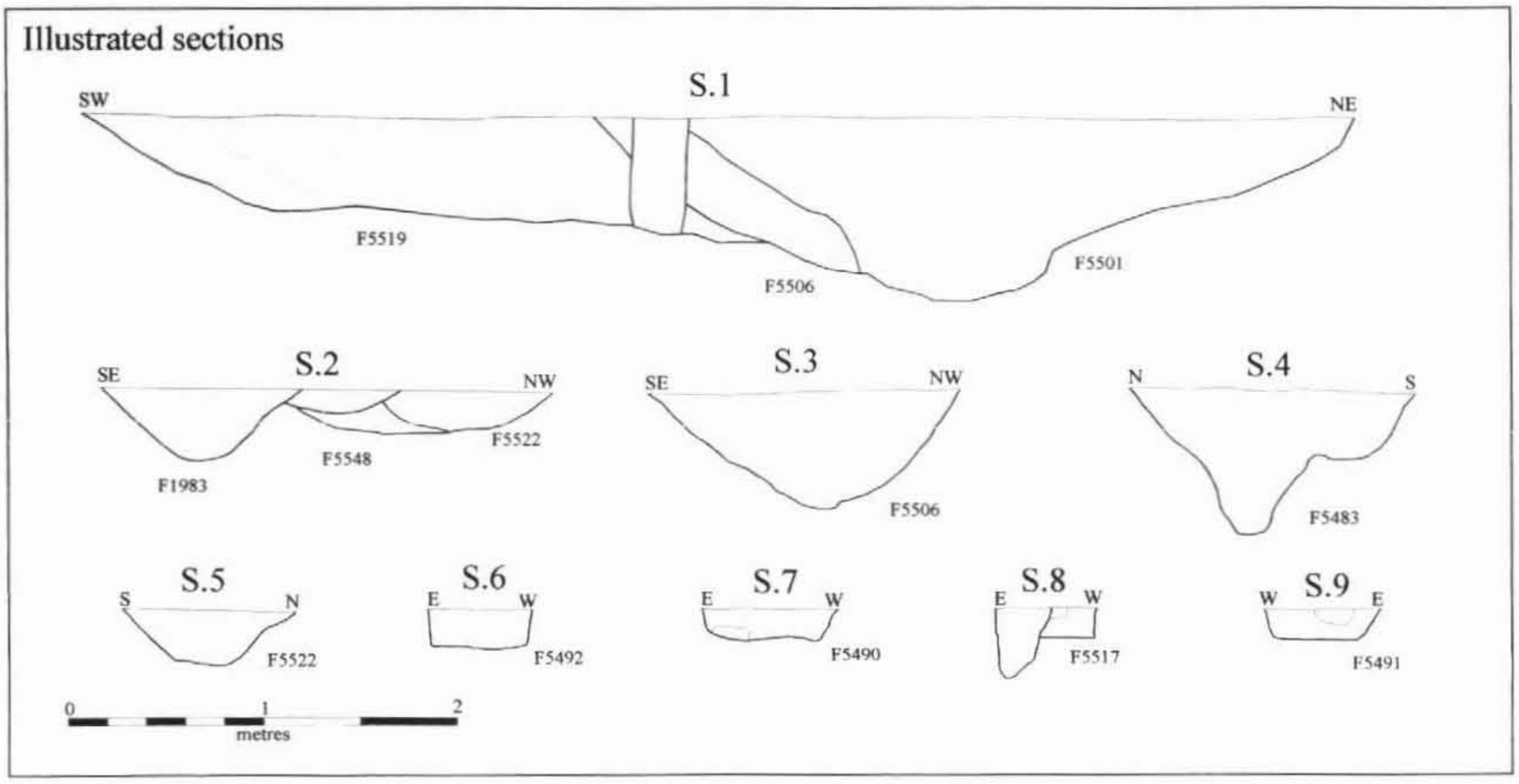
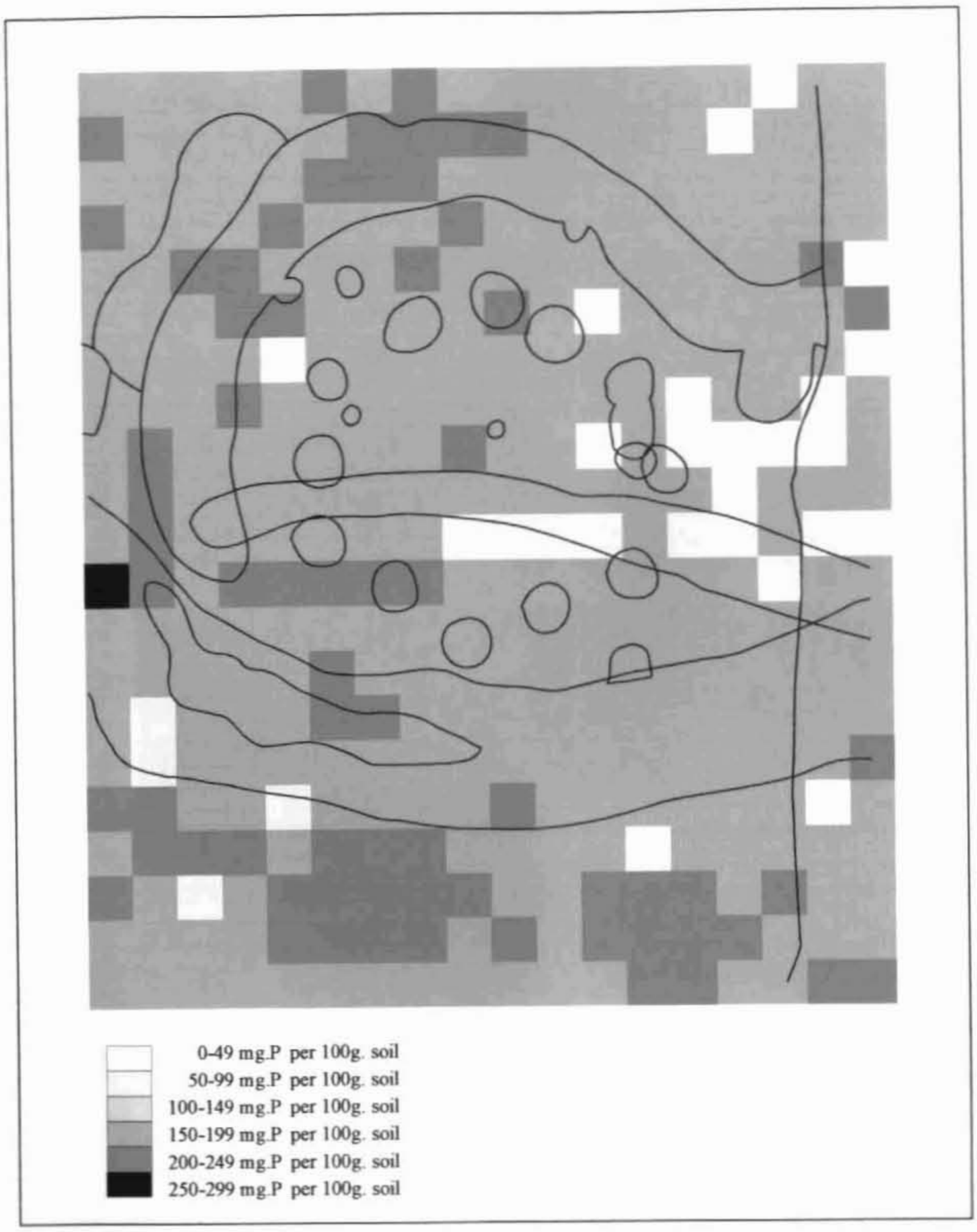

Illustrated sections
S.1
SW
NE
F5519
F5506
F5501
S.2
SE
NW
F5548
F5522
F1983
S.3
SE
NW
F5506
S.4
N
S
F5483
S.5
S
N
F5522
S.6
E
W
F5492
S.7
E
W
F5490
S.8
E
W
F5517
S.9
W
E
F5491
0
1
2
metres

FIG 3.4


0-49 mg.P per 100g. soil
50-99 mg.P per 100g. soil
100-149 mg.P per 100g. soil
150-199 mg.P per 100g. soil
200-249 mg.P per 100g. soil
250-299 mg.P per 100g. soil

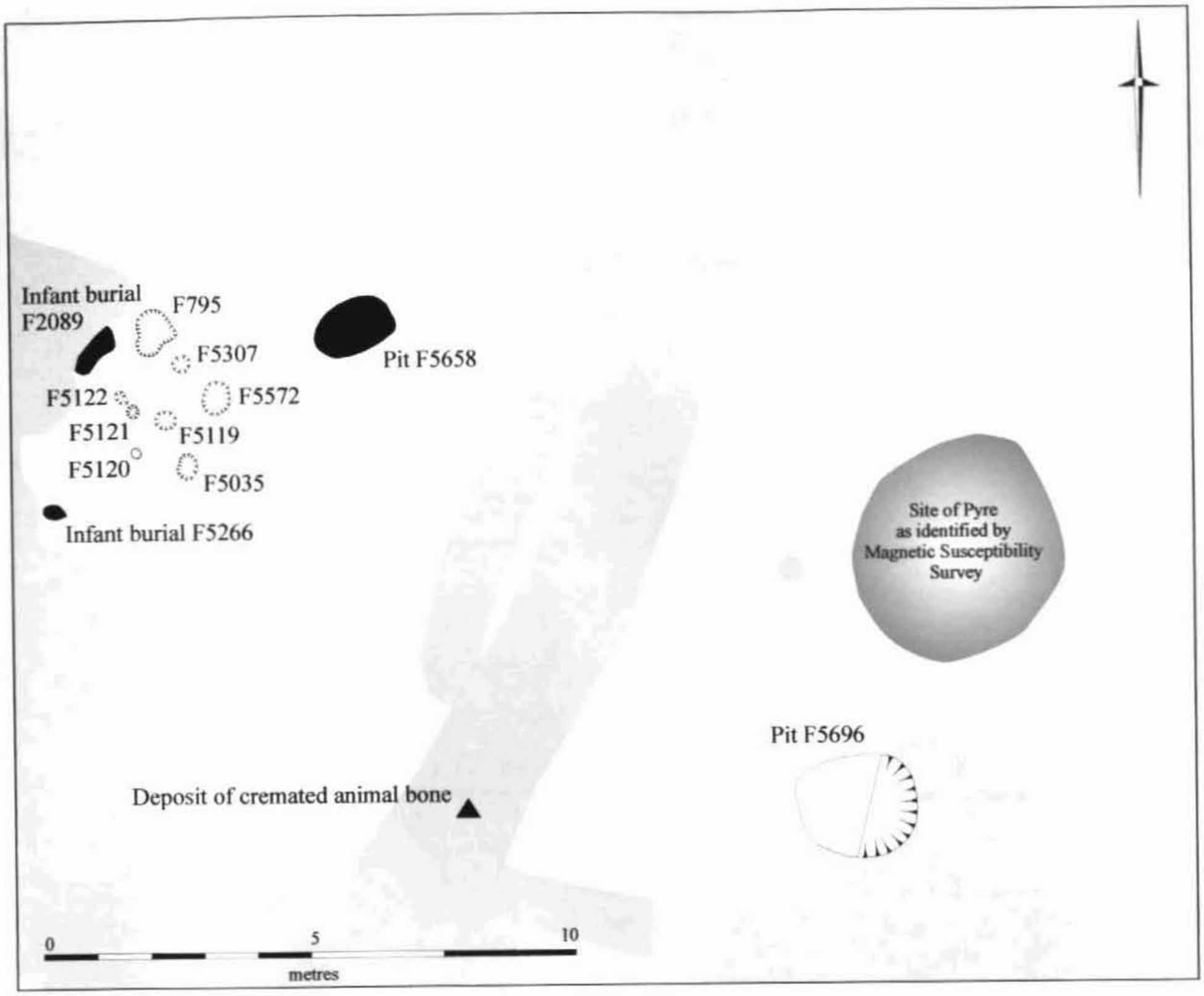
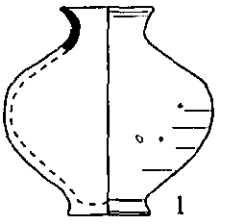
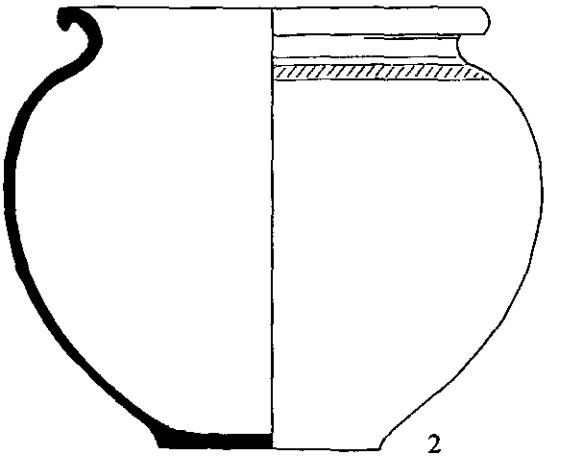

Infant burial
F2089
F795
F5307
Pit F5658
F5122
F5572
F5121
F5119
F5120
F5035
Infant burial F5266
Site of Pyre
as identified by
Magnetic Susceptibility
Survey
Pit F5696
Deposit of cremated animal bone
0
5
10
metres

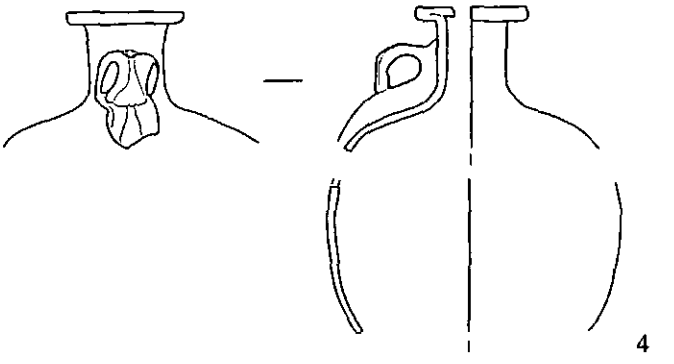
FIG 3.6

Cremation 1 (F5035)

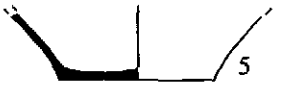




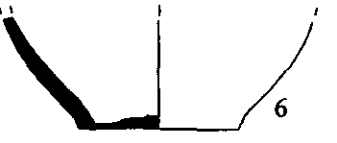
Cremation 2 (F5119)



Cremation 3 (F5120)

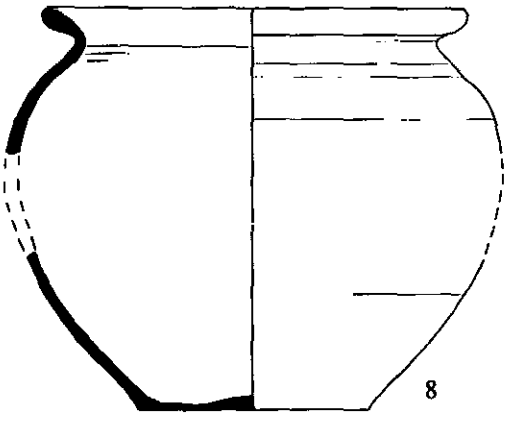


Cremation 4 (F5121)



Cremation 5 (F5122)

Cremation 6 (F5305)



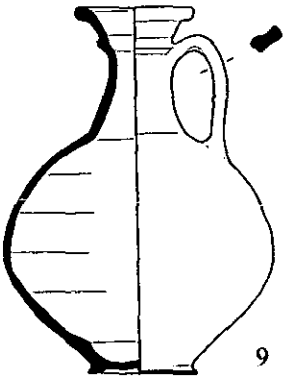
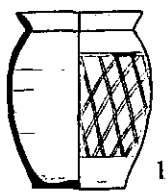
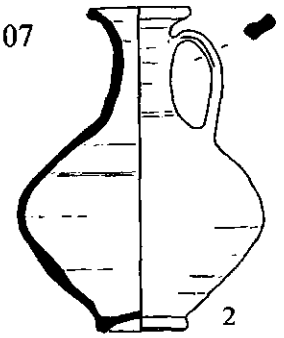
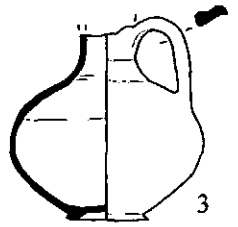


FIG 3·7

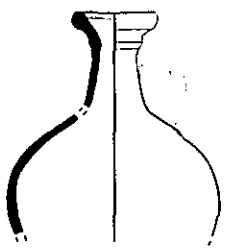
Cremation 7 (F5307

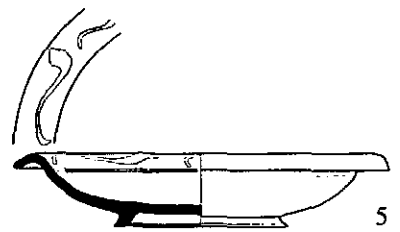

1


2


3

Cremation 8 (F5572)


4


5

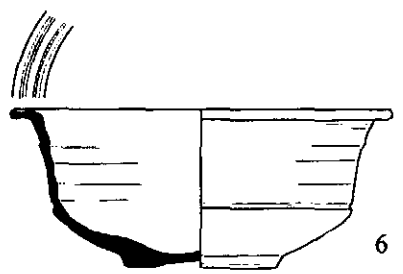
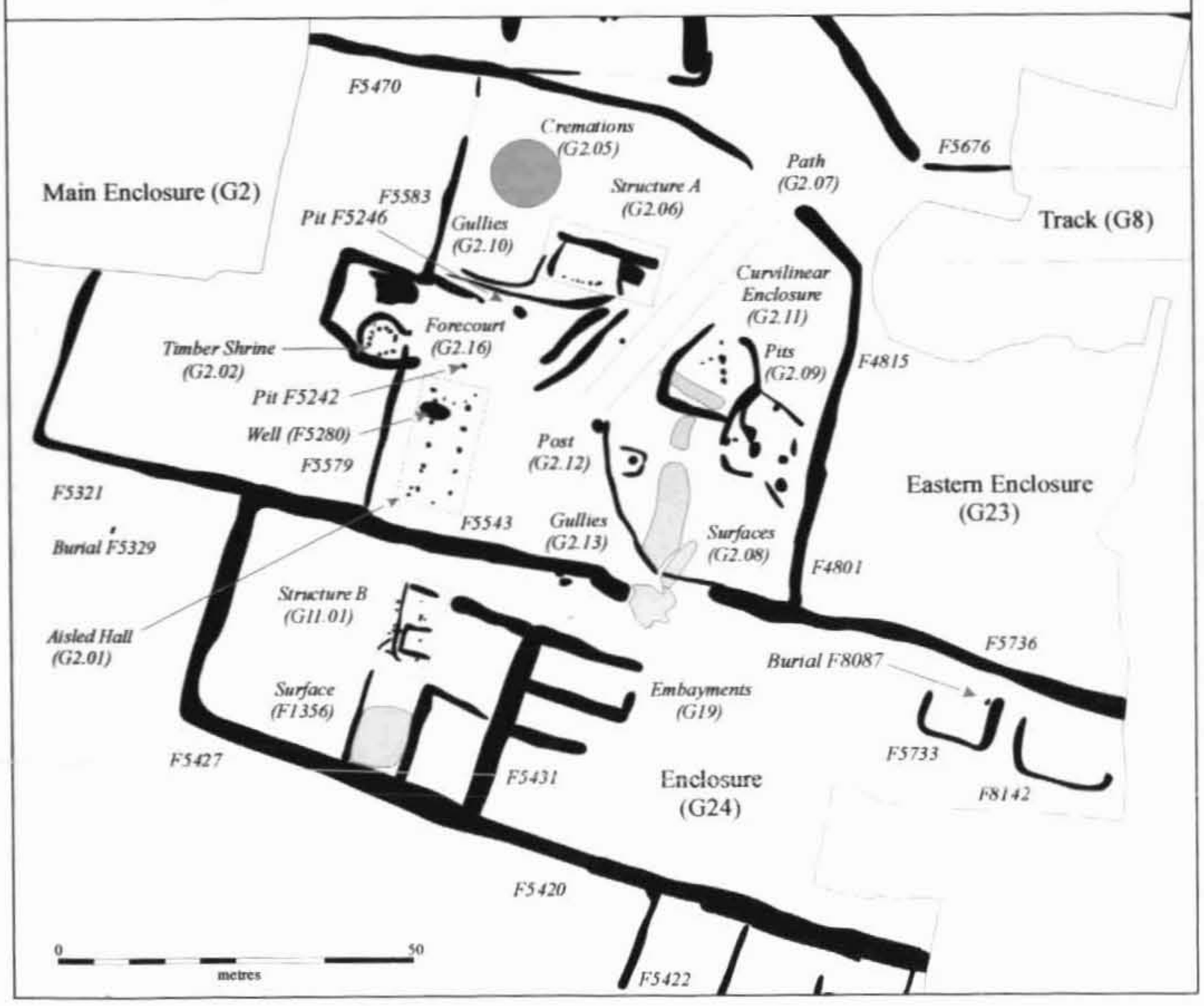

6

FIG 3.8

Phase II (c. AD180-270)
Enclosure (G9)
Track (G5)
Enclosure (G16)
Enclosure (G7)
Main Enclosure (G2)
Track (G8)
Eastern Enclosure (G23)
Aisled Hall (G2.01)
Enclosure (G24)
Southern Enclosure (G13)
Southern Boundary (G4)
0
100
metres


F5470
Cremations (G2.05)
Path (G2.07)
F5676
Main Enclosure (G2)
F5583
Structure A (G2.06)
Pit F5246
Gullies (G2.10)
Track (G8)
Curvilinear Enclosure (G2.11)
Forecourt (G2.16)
Timber Shrine (G2.02)
Pits (G2.09)
F4815
Pit F5242
Well (F5280)
Post (G2.12)
F5579
F5321
Eastern Enclosure (G23)
F5543
Gullies (G2.13)
Surfaces (G2.08)
Burial F5329
F4801
Structure B (G11.01)
Aisled Hall (G2.01)
F5736
Burial F8087
Surface (F1356)
Embayments (G19)
F5427
F5431
Enclosure (G24)
F5733
F8142
F5420
F5422
0
50
metres

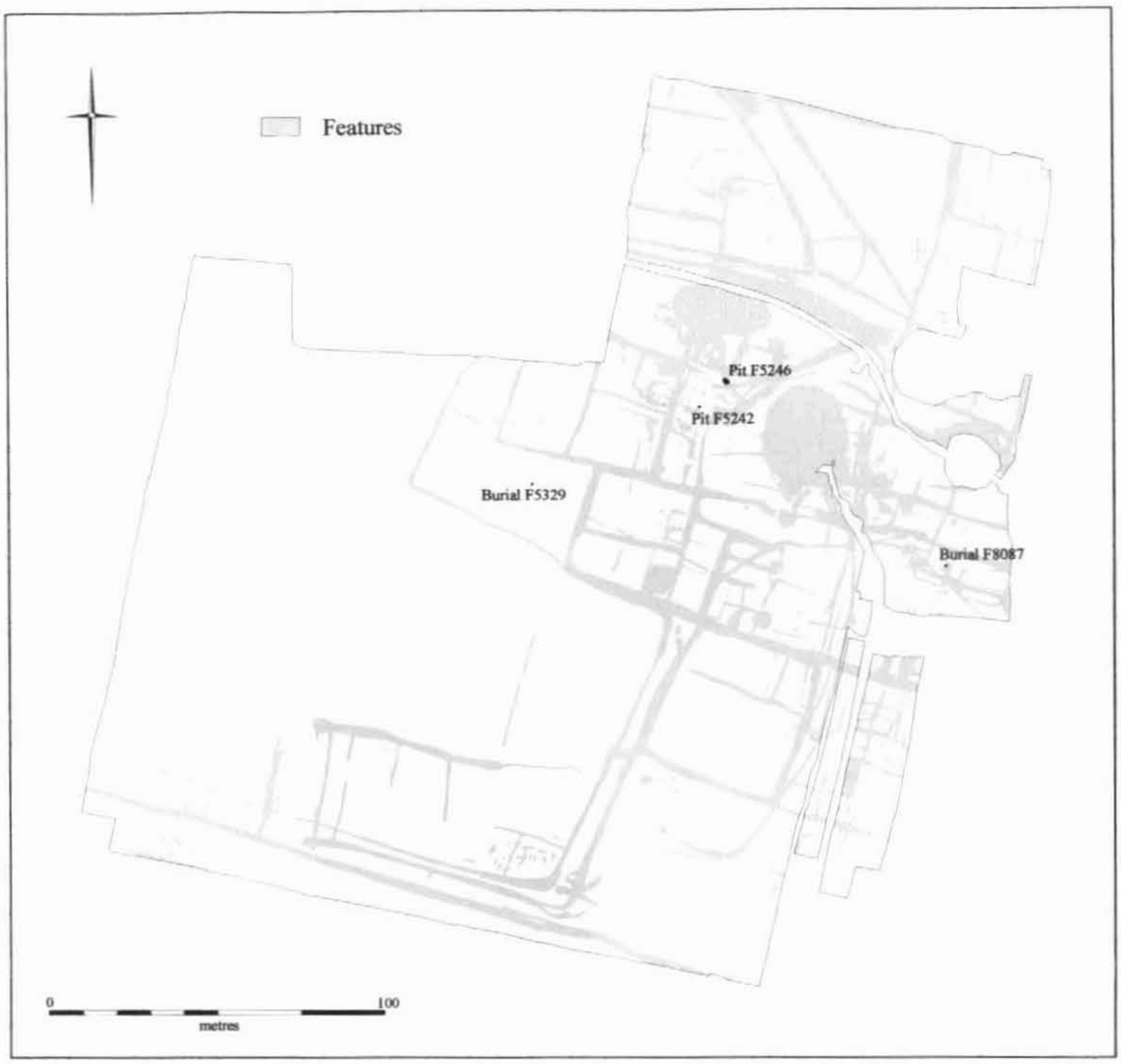

Features
Pit F5246
Pit F5242
Burial F5329
Burial F8087
0
100
metres

FIG 4.1

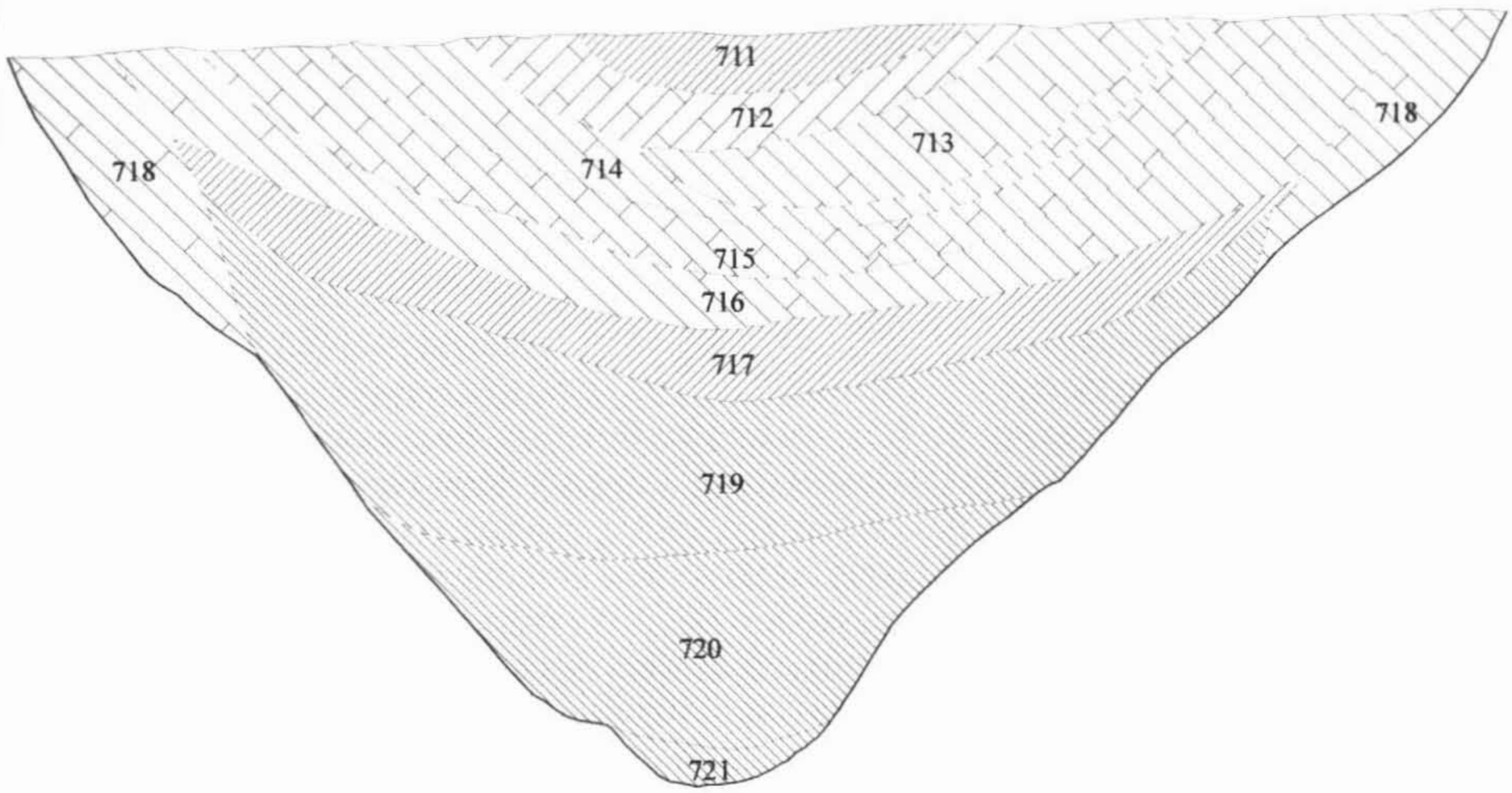
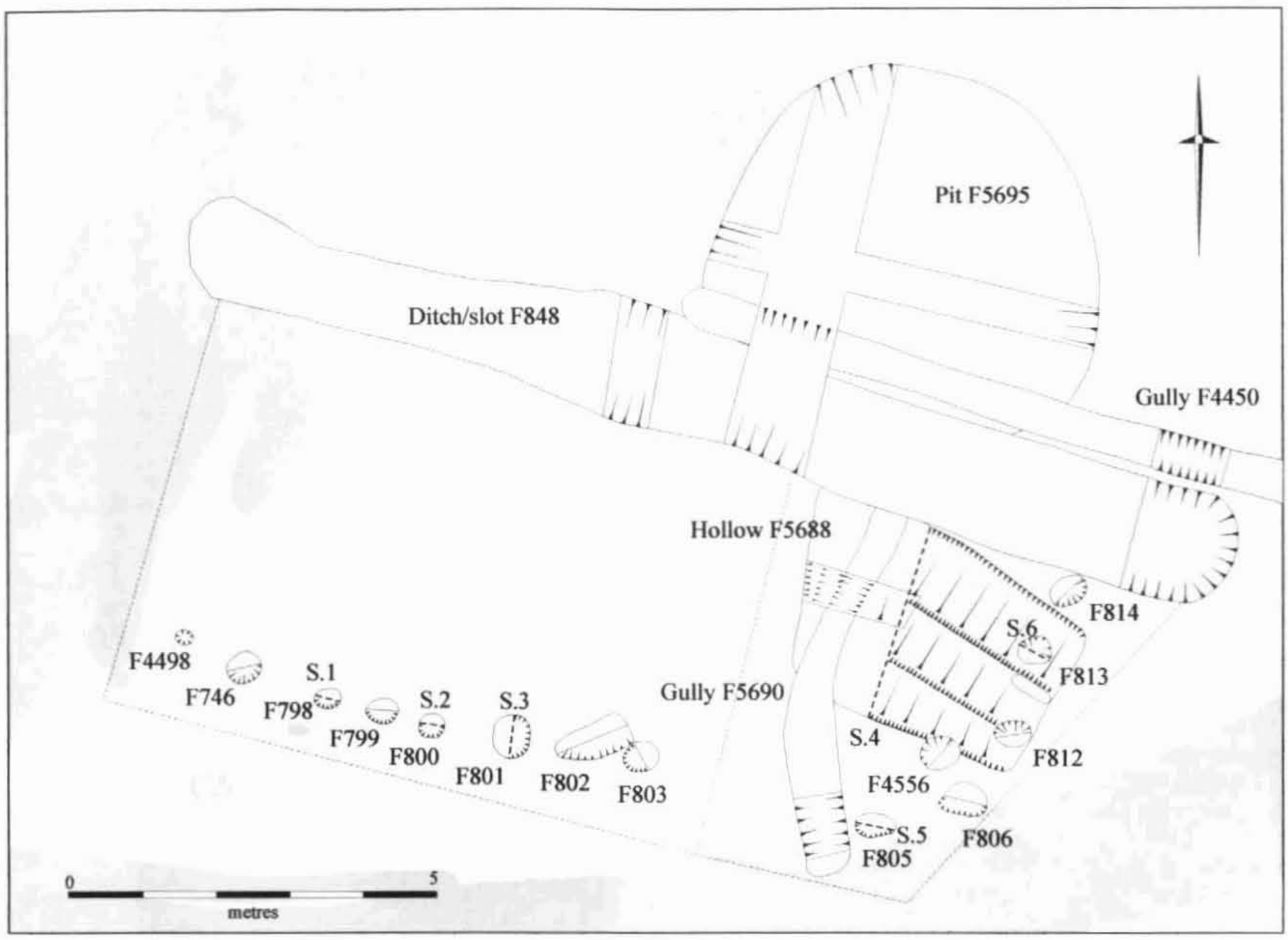


FIG 4.2.


Pit F5695
Ditch/slot F848
Gully F4450
Hollow F5688
F814
S.6
F813
F4498
S.1
F746
F798
S.2
S.3
Gully F5690
F799
F800
F801
F802
F803
S.4
F812
F4556
S.5
F806
F805
0
5
metres

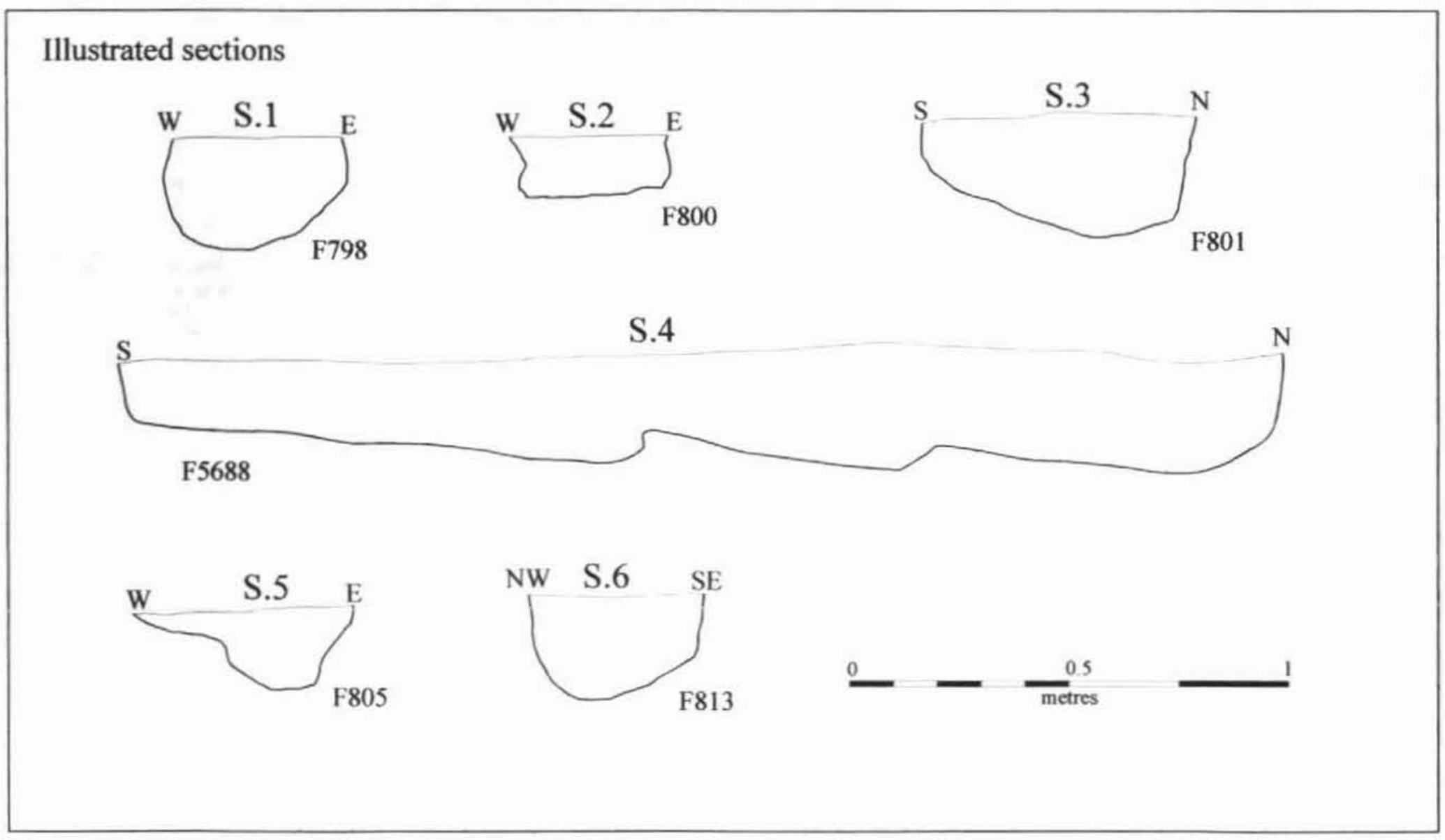
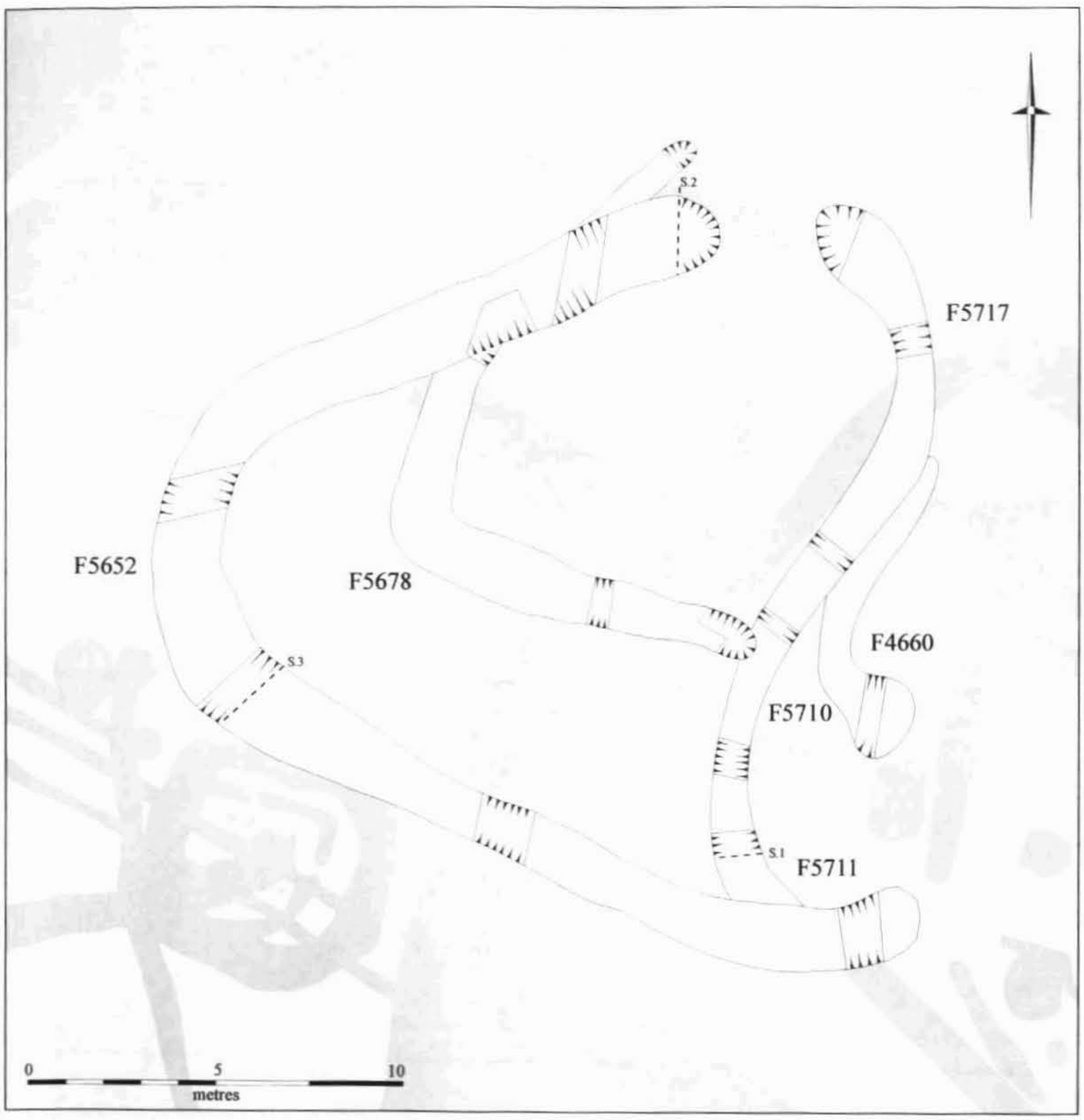

Illustrated sections
W
S.1
E
F798
W
S.2
E
F800
S
S.3
N
F801
S
S.4
N
F5688
W
S.5
E
F805
NW
S.6
SE
F813
0
0.5
1
metres

FIG 4.3


S2
F5717
F5652
F5678
F4660
S3
F5710
S1
F5711
0
5
10
metres

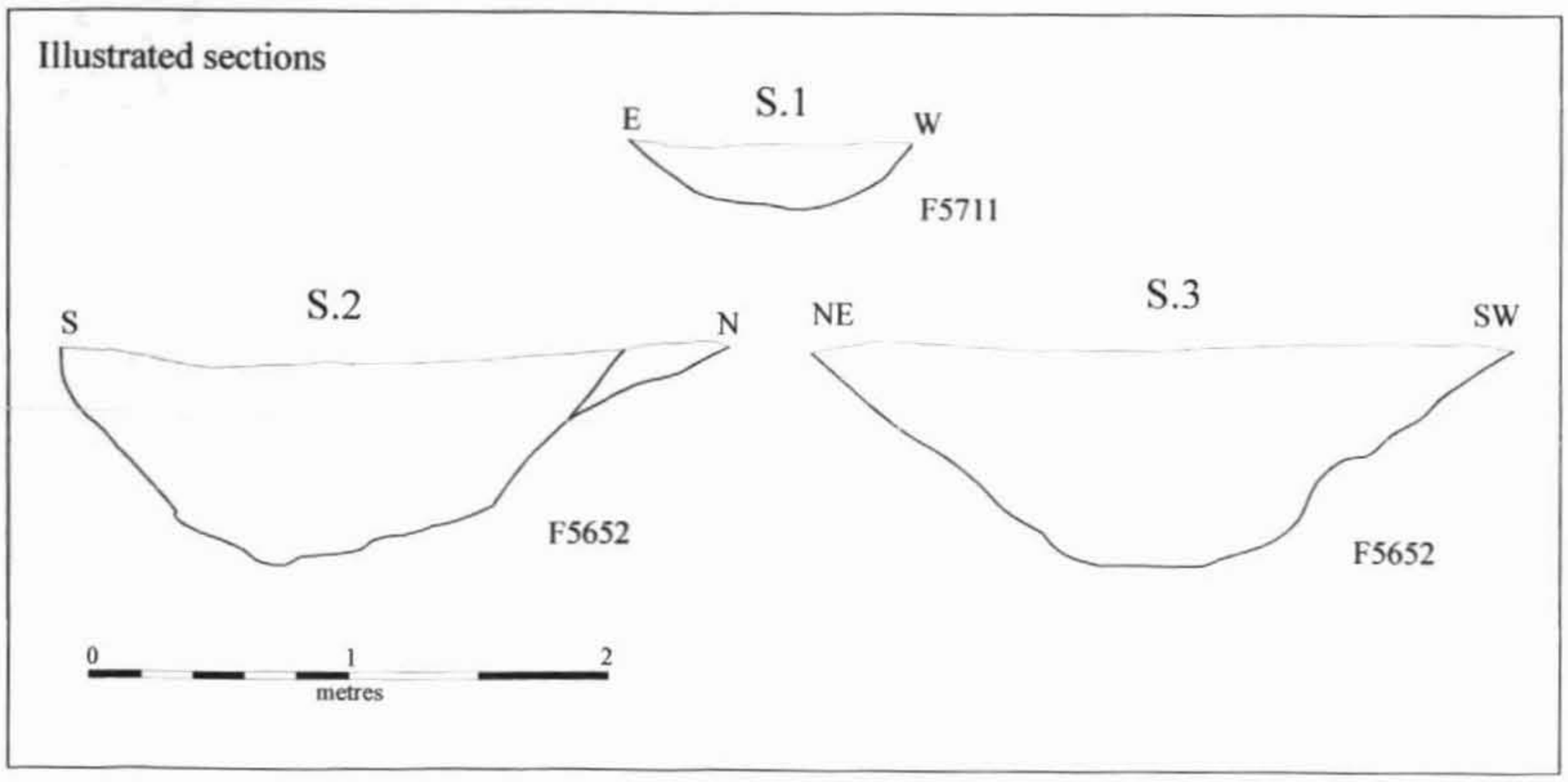
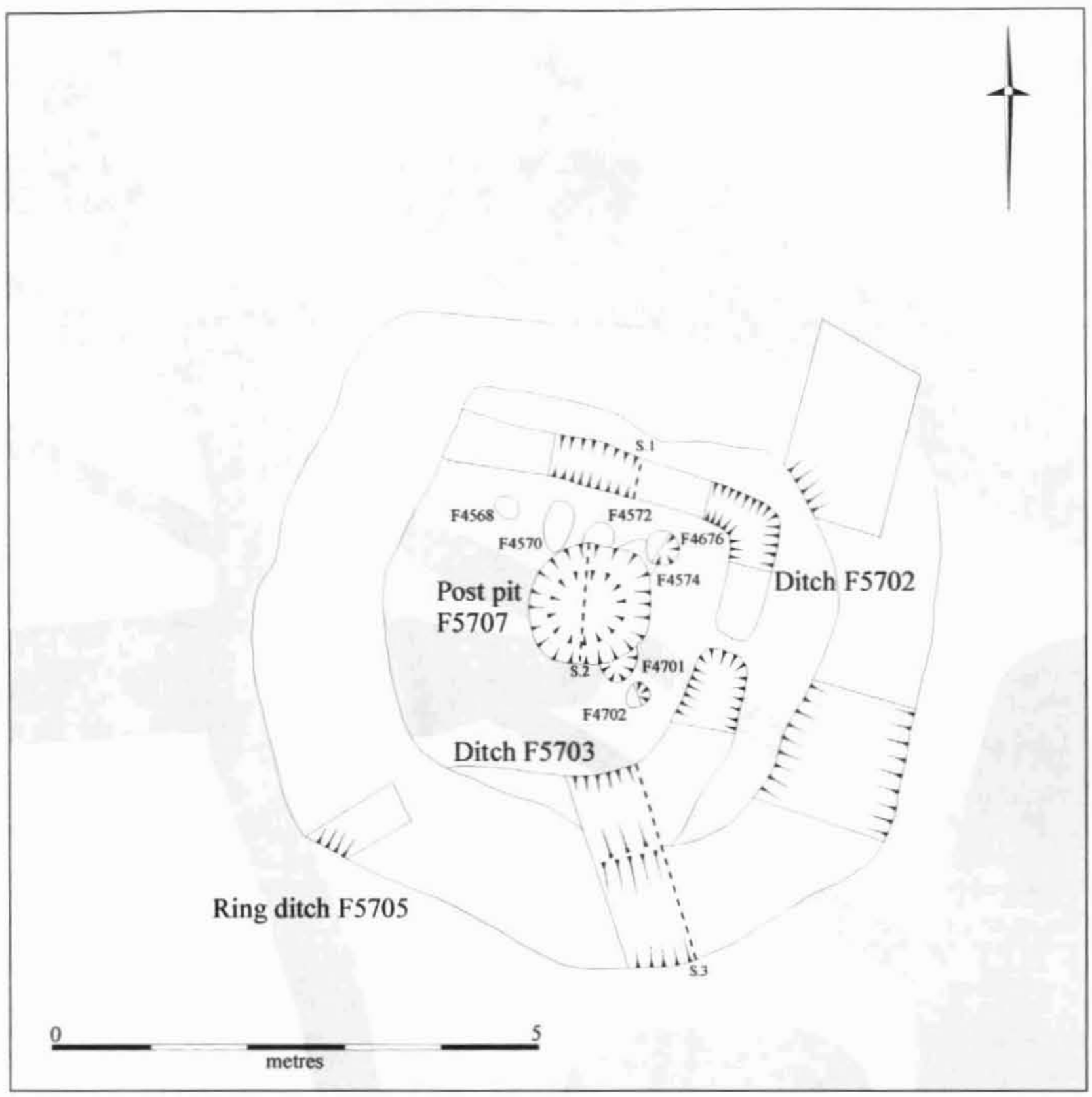

Illustrated sections
S.1
E
W
F5711
S.2
S
N
F5652
S.3
NE
SW
F5652
0
1
2
metres

FIG 4.4


S.1
F4568
F4572
F4570
F4676
F4574
Post pit
F5707
Ditch F5702
S.2
F4701
F4702
Ditch F5703
Ring ditch F5705
S.3
0
5
metres

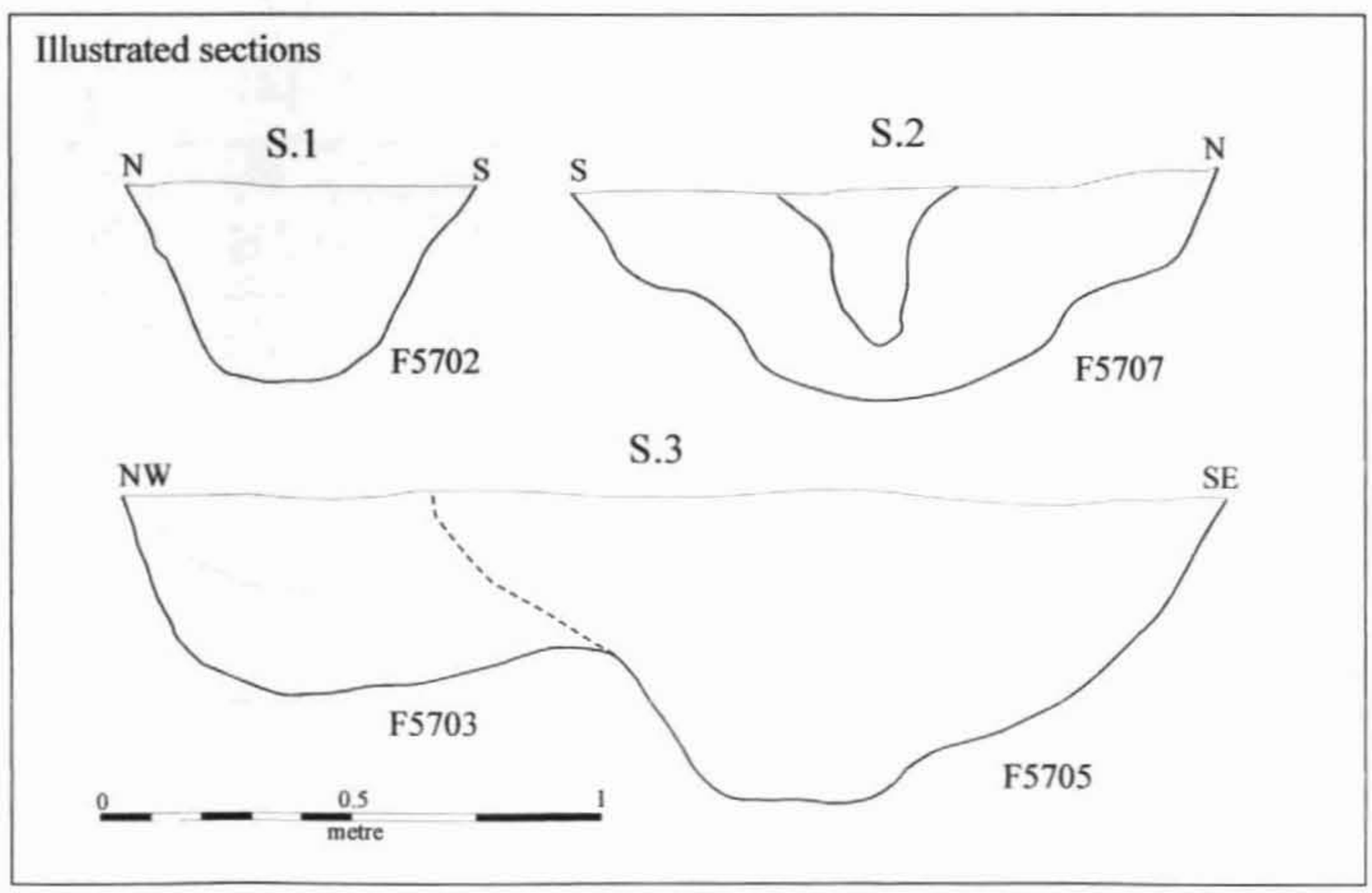

Illustrated sections
S.1
N
S
F5702
S.2
S
N
F5707
S.3
NW
SE
F5703
F5705
0
0.5
1
metre

FIG 4.5

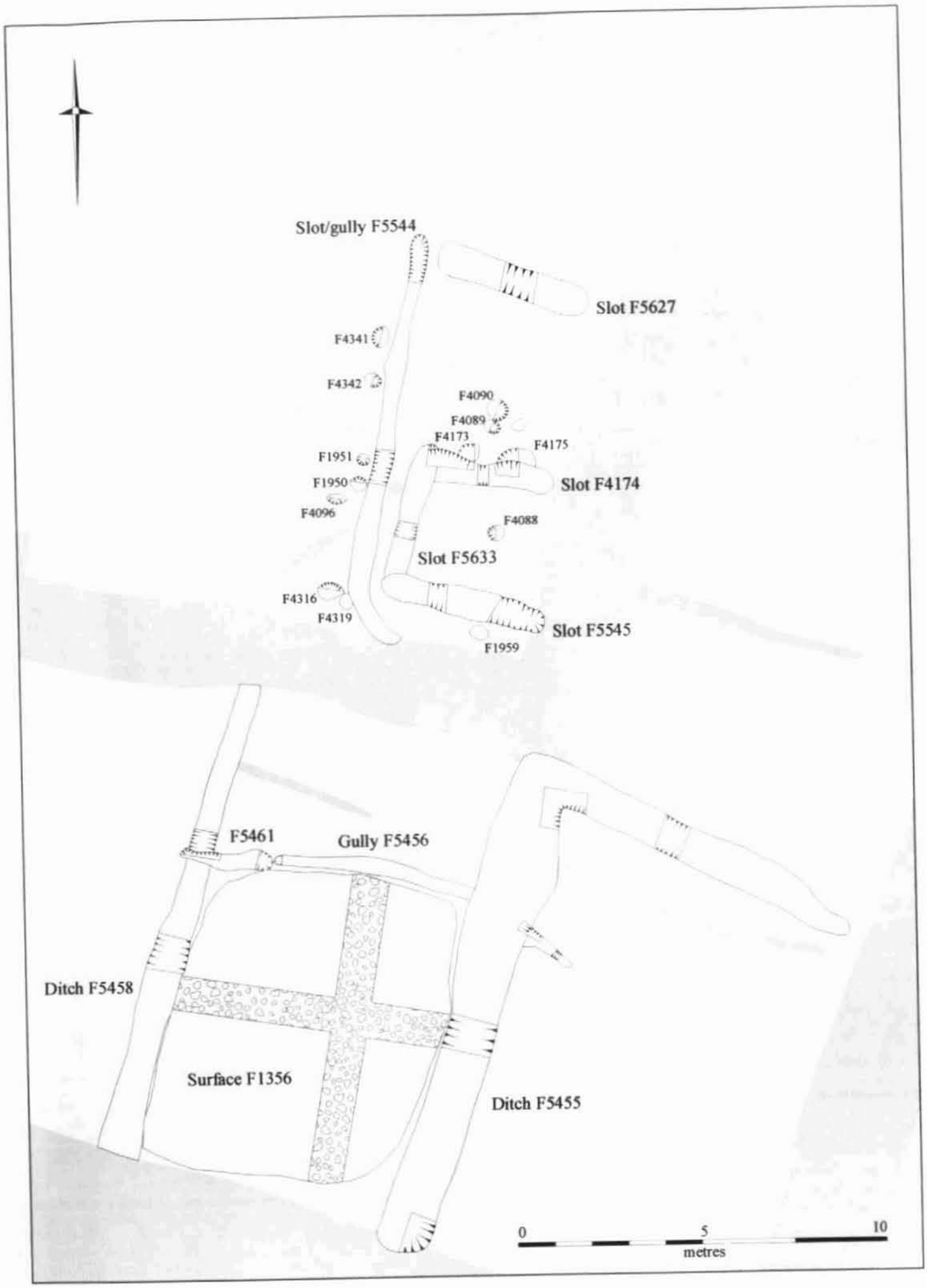
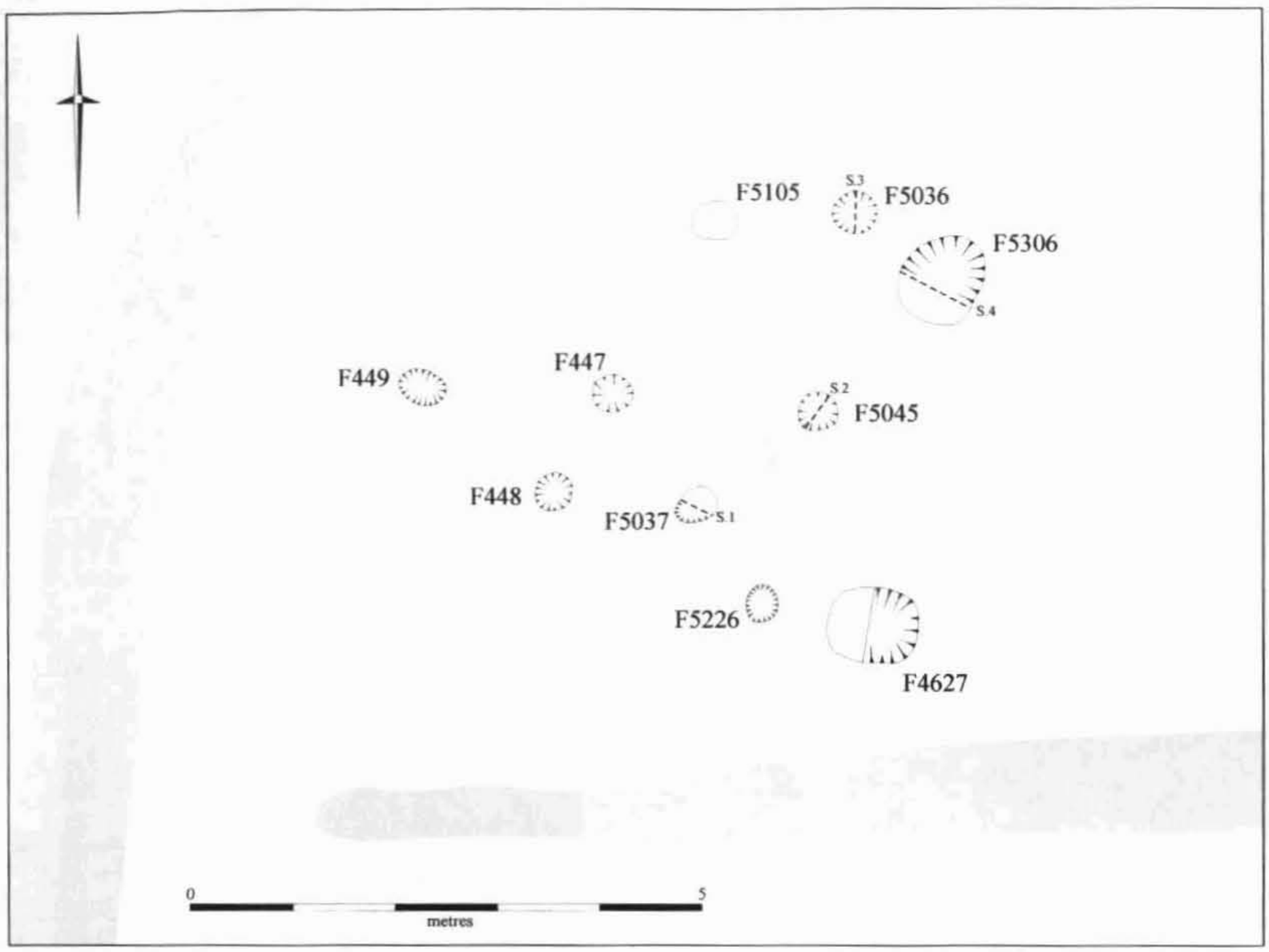

Slot/gully F5544
Slot F5627
F4341
F4342
F4090
F4089
F4173
F4175
F1951
F1950
Slot F4174
F4096
F4088
Slot F5633
F4316
F4319
Slot F5545
F1959
F5461
Gully F5456
Ditch F5458
Surface F1356
Ditch F5455
0
5
10
metres

FIG 4.6

Phase III (c. AD270-410)
Northern Boundary (G29)
Curvilinear Enclosure (G17)
Enclosure (G15)
Main Enclosure (G2)
Track (G8)
Enclosure (G31)
Forecourt (G2.16)
Curvilinear Enclosure (G2.11)
Enclosure (G14)
Embayments (G19)
Enclosure (G11)
Enclosure (G10)
Square Enclosure (G28)
Western Boundary (G21)
Enclosure (G18)
Enclosure (G27)
Enclosure (G26)
Inhumation Cemetery (G22)
Southern Boundary (G4)
0
100
metres
F5681
Pitting (G2.17)
F5677
F5480
F5559
Surface (G2.18)
F5671
Main Enclosure (G2)
F5501
F5061
Path (G2.07)
Track (G8)
Enclosure (G31)
F5090
F8264
F5006
F4759
F5092
Forecourt (G2.16)
Curvilinear Enclosure (G2.11)
F5321
Structure C (G2.15)
F4912
Surface (G32)
Enclosure (G14)
Post (G2.12)
F4863
F4802
Structure D (G11.05)
Surfaces (G2.08)
F4852
F5731
F5428
Embayments (G19)
F4794
F5735
F5318
Surface (F1356)
F5431
F4834
F5467
F8140
Enclosure (G11)
F5427
Enclosure (G10)
F5443
Square Enclosure (G28)
F5420
F5353
0
50
metres

FIG 5.1


F5105
S.3
F5036
F5306
S.4
F449
F447
S.2
F5045
F448
F5037
S.1
F5226
F4627
0
5
metres

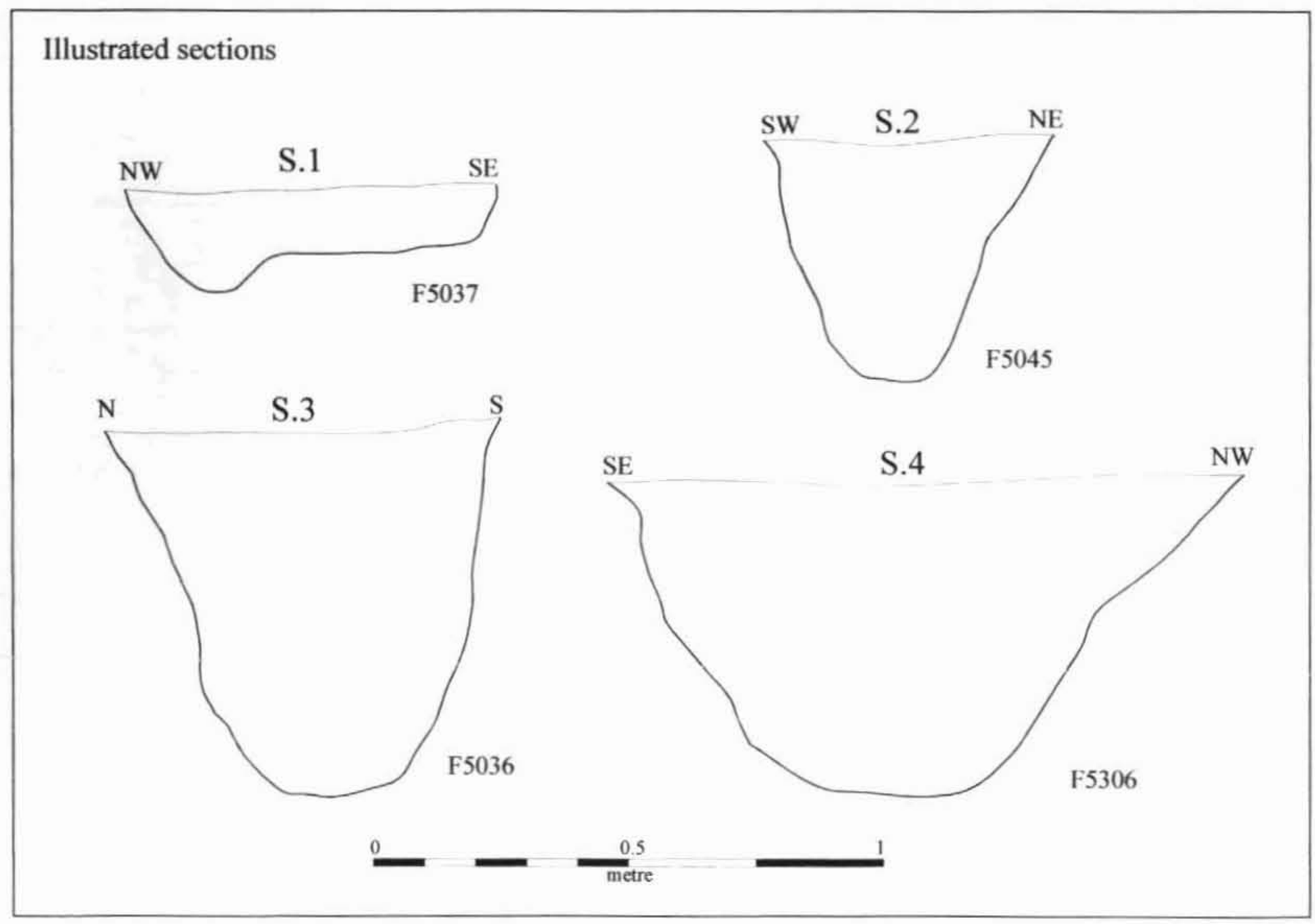
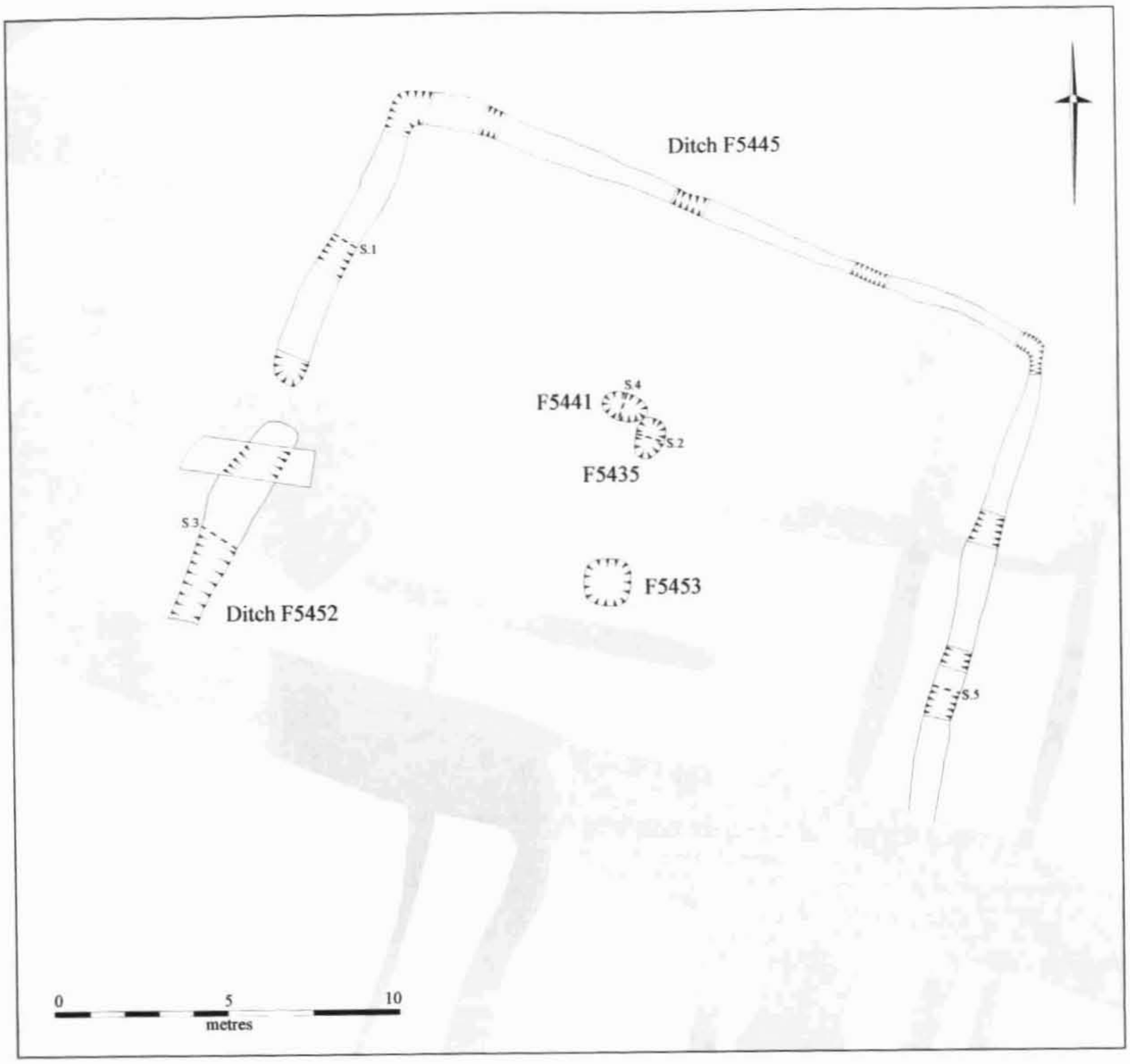

Illustrated sections
NW
S.1
SE
F5037
SW
S.2
NE
F5045
N
S.3
S
F5036
SE
S.4
NW
F5306
0
0.5
1
metre

FIG 5.2.


Ditch F5445
S.1
F5441
S.4
S.2
F5435
S.3
F5453
Ditch F5452
S.5
0
5
10
metres

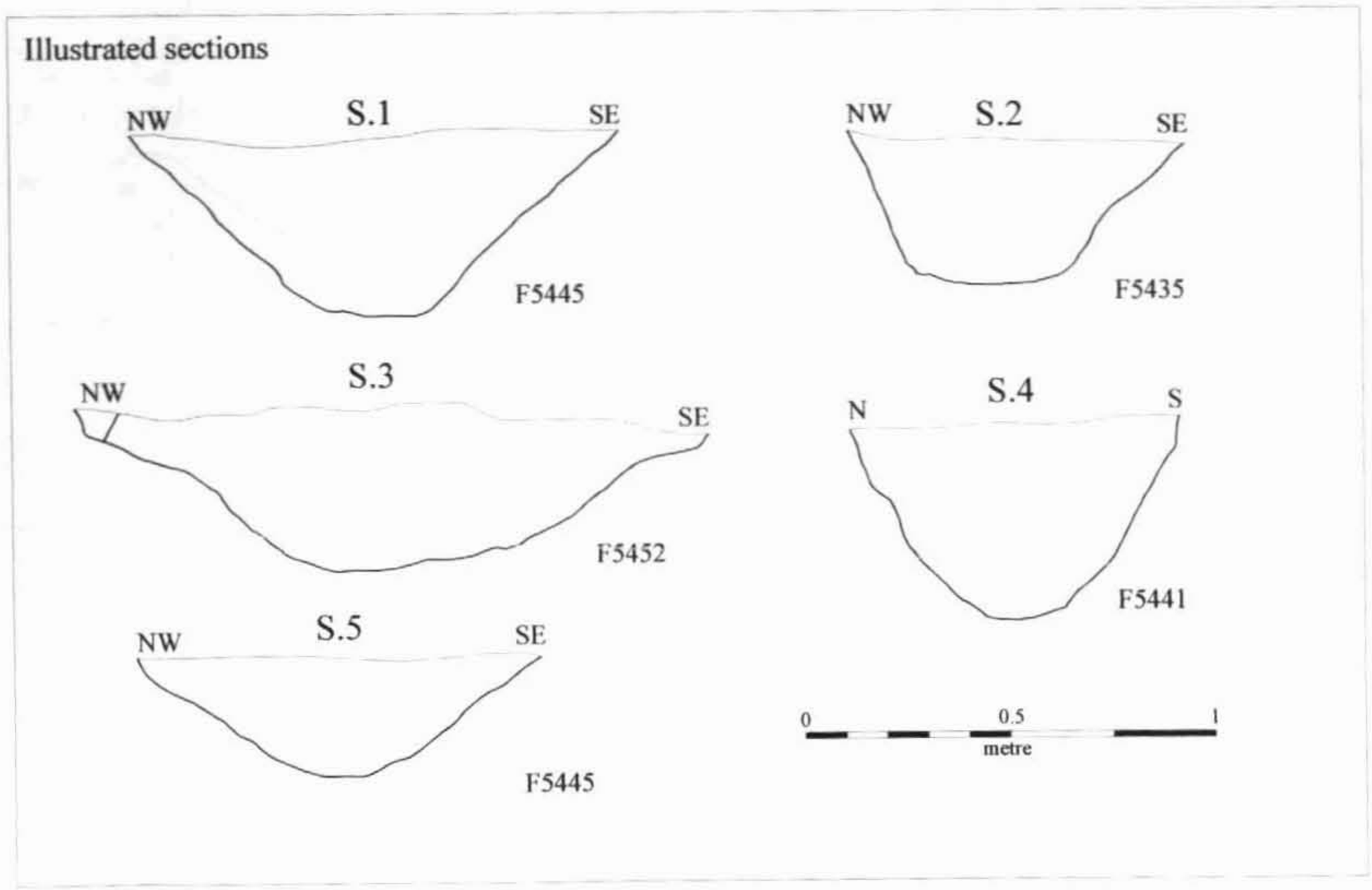

Illustrated sections
NW
S.1
SE
F5445
NW
S.2
SE
F5435
NW
S.3
SE
F5452
N
S.4
S
F5441
NW
S.5
SE
F5445
0
0.5
1
metre

FIG 5.3

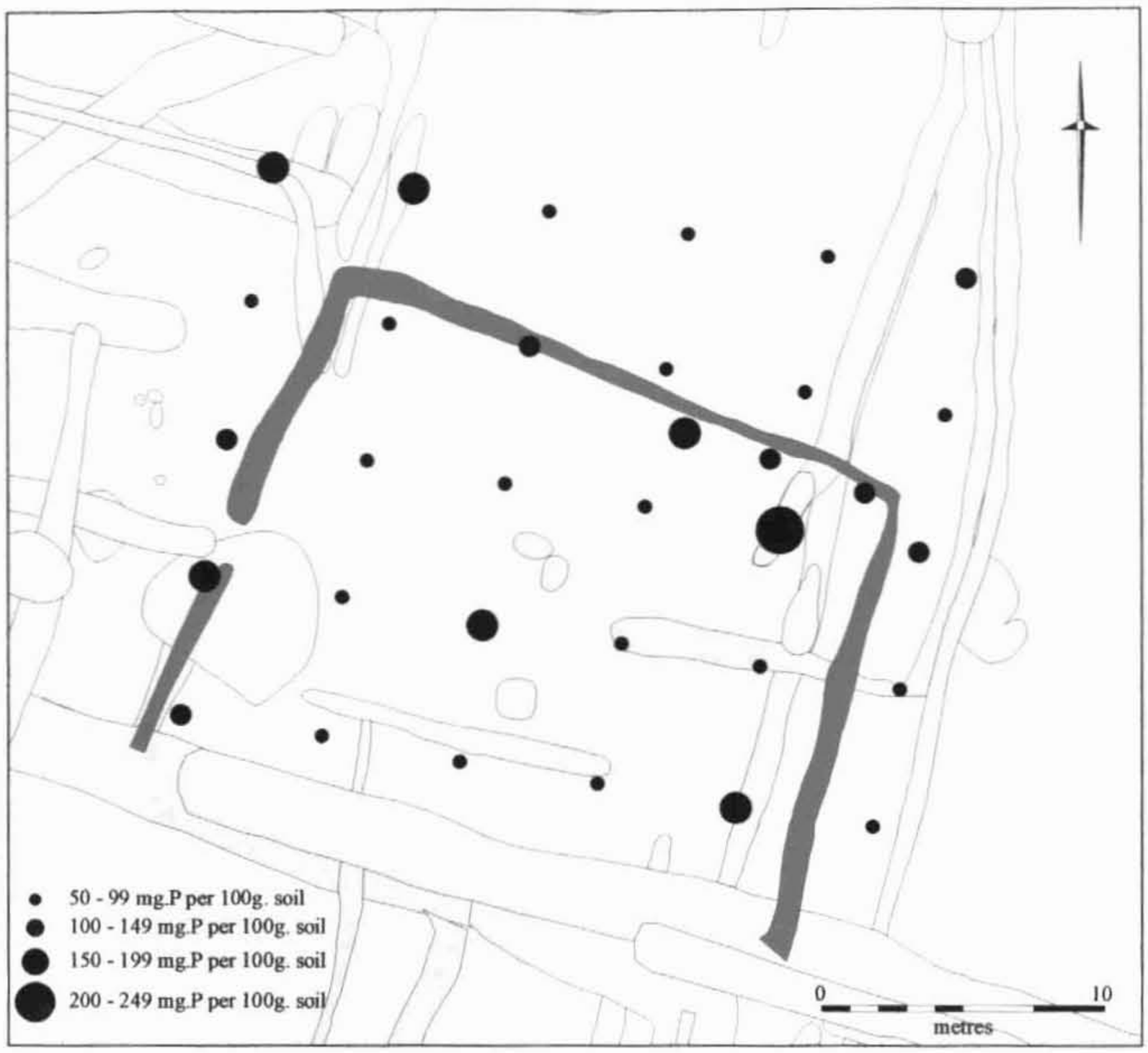
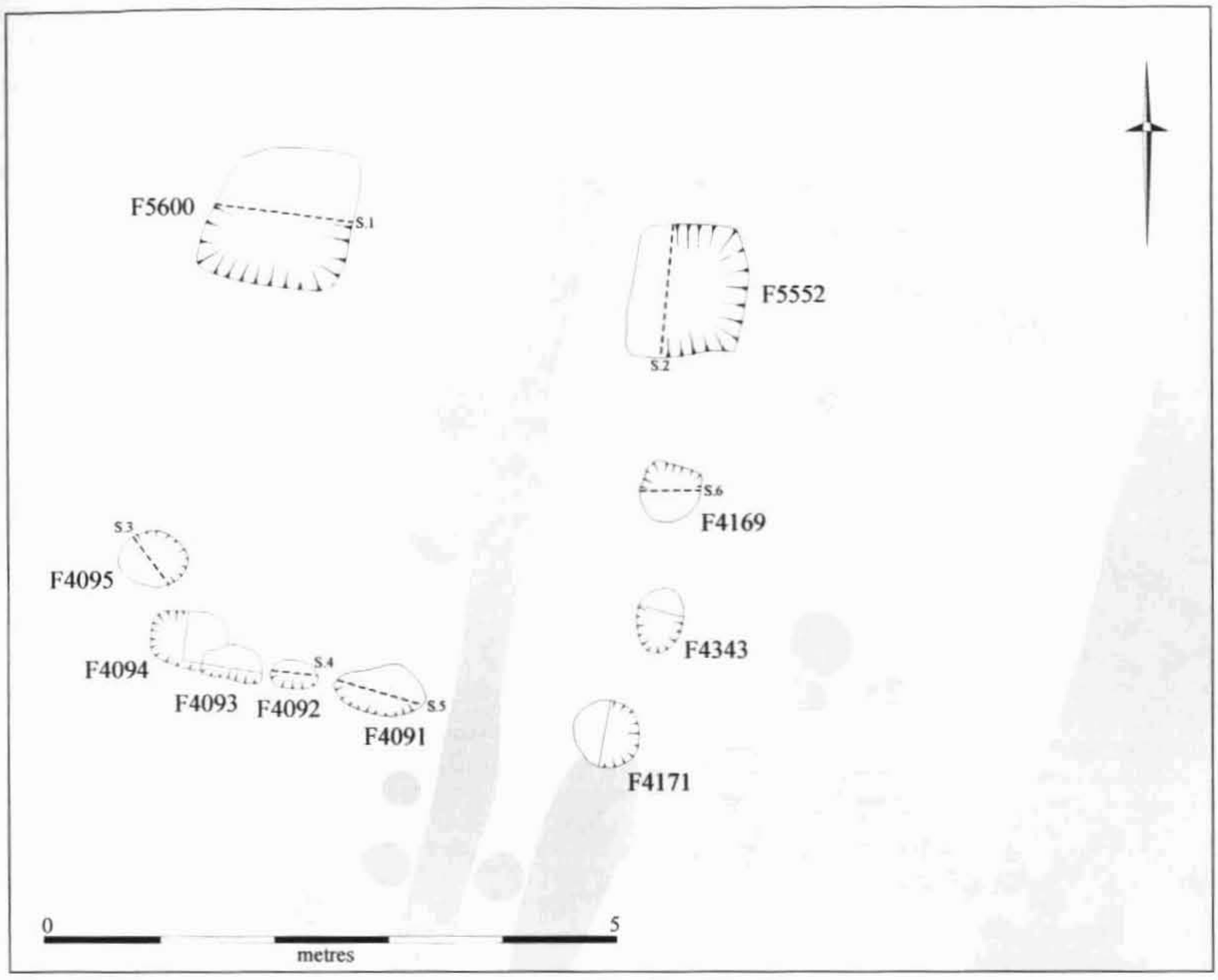

50 - 99 mg.P per 100g. soil
100 - 149 mg.P per 100g. soil
150 - 199 mg.P per 100g. soil
200 - 249 mg.P per 100g. soil
0
10
metres

FIG 5.4


F5600
S.1
F5552
S.2
S.6
F4169
S.3
F4095
F4343
F4094
S.4
F4093
F4092
S.5
F4091
F4171
0
5
metres

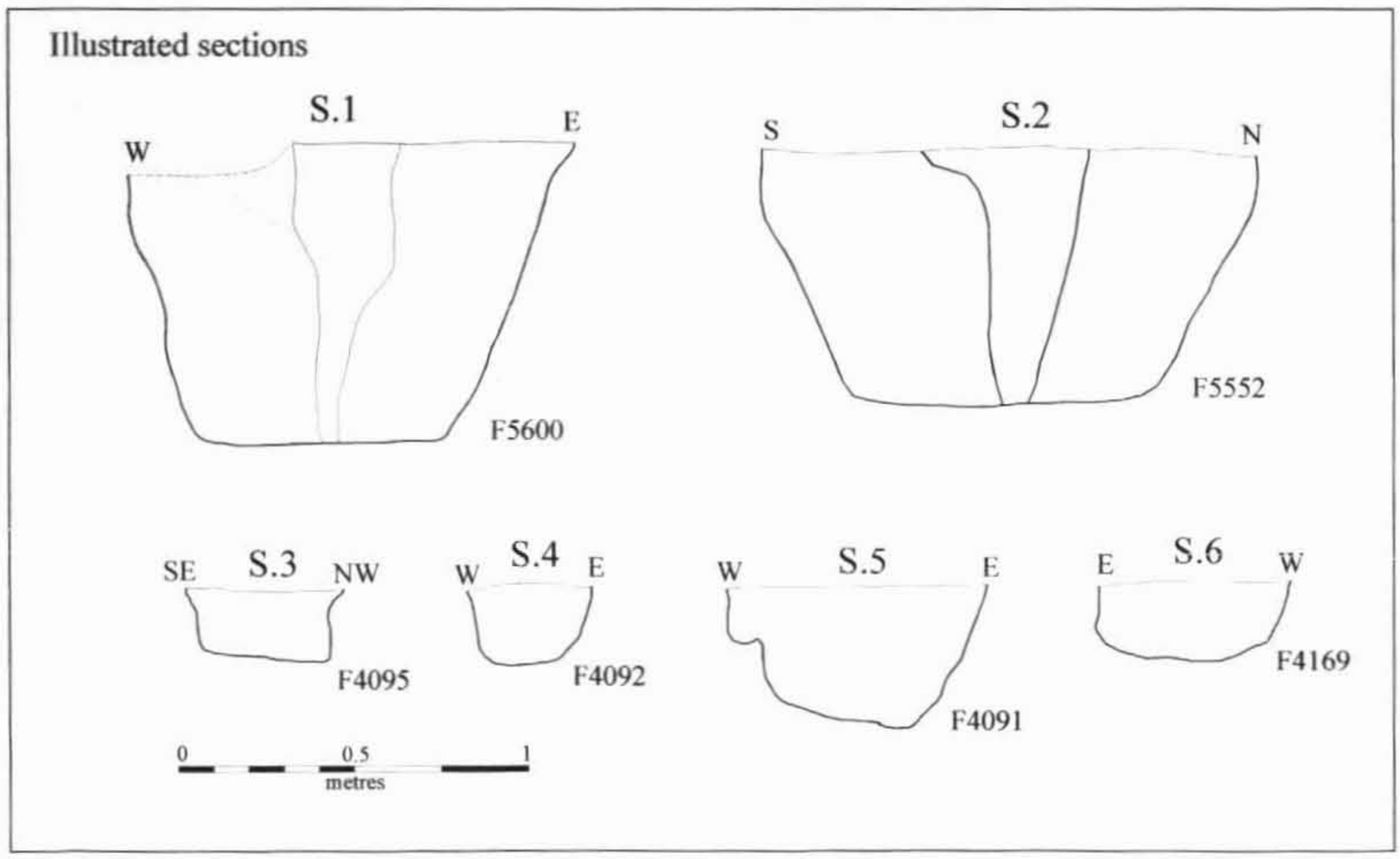

Illustrated sections
S.1
W
E
F5600
S.2
S
N
F5552
SE
S.3
NW
F4095
W
S.4
E
F4092
W
S.5
E
F4091
E
S.6
W
F4169
0
0.5
1
metres

FIG 5.5

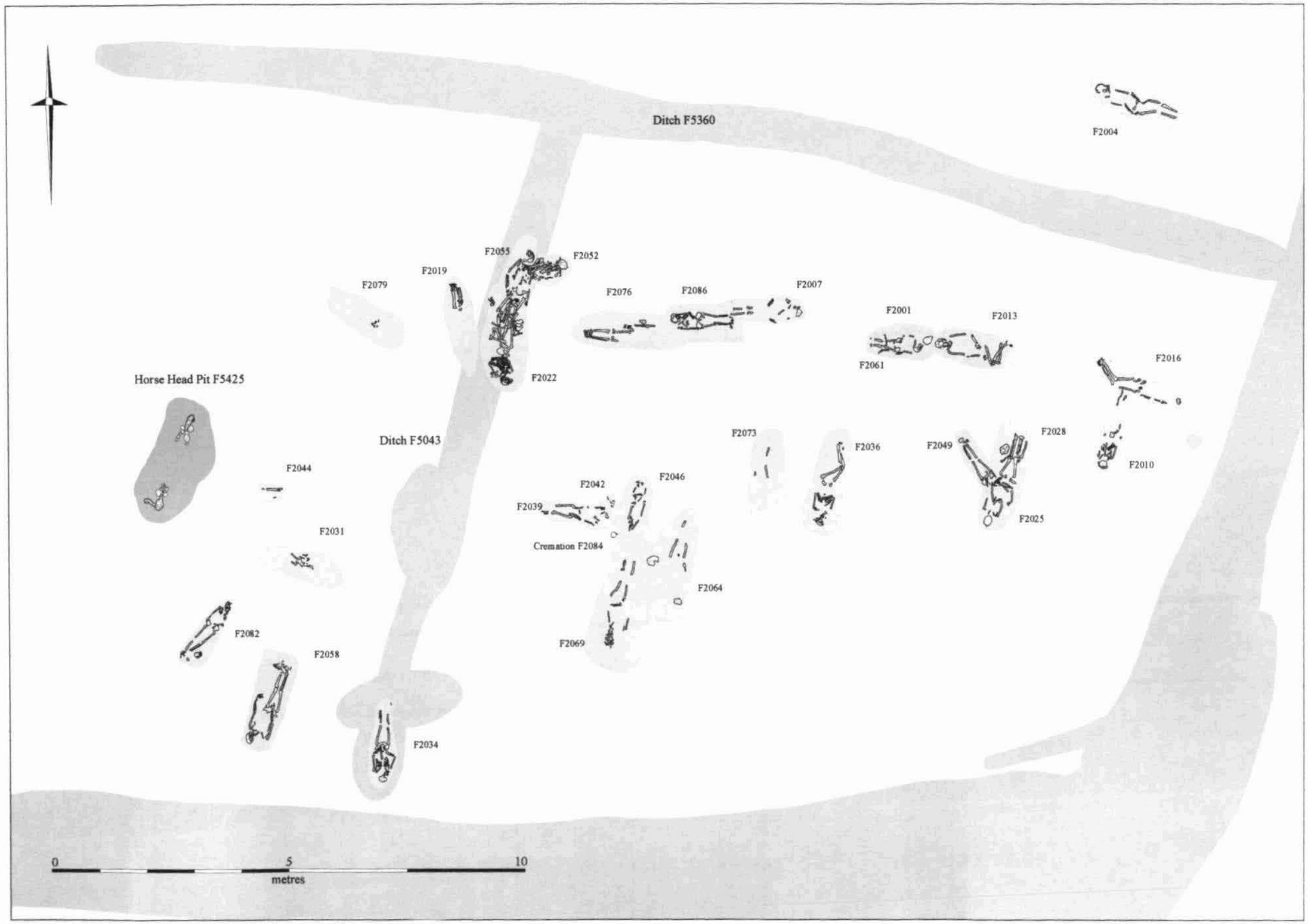

Ditch F5360
F2004
F2055
F2052
F2019
F2079
F2076
F2086
F2007
F2001
F2013
F2061
F2016
Horse Head Pit F5425
F2022
Ditch F5043
F2073
F2036
F2049
F2028
F2010
F2044
F2042
F2046
F2039
F2025
F2031
Cremation F2084
F2064
F2082
F2069
F2058
F2034
0
5
10
metres

FIG 5.6

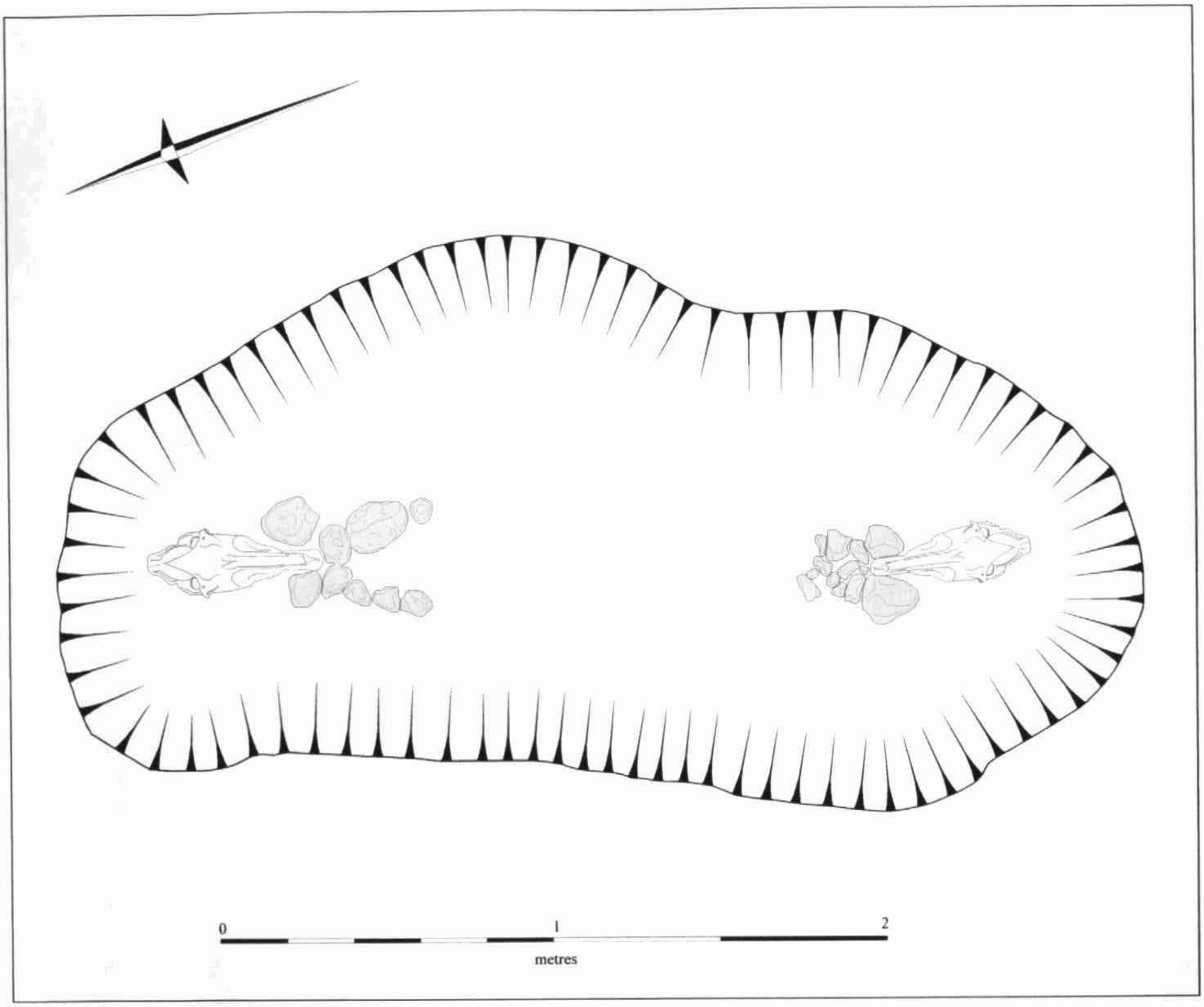
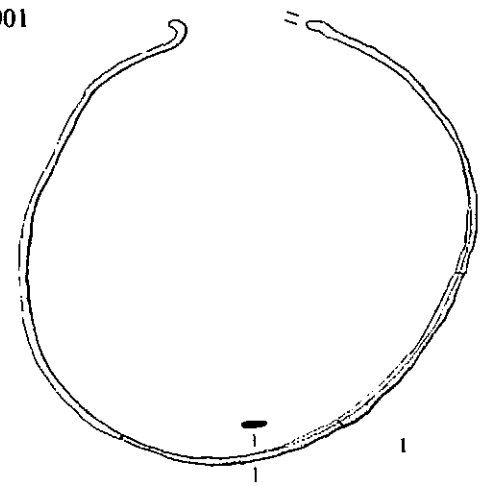


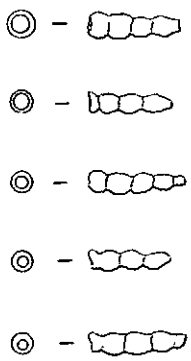
FIG 5.7

F2001



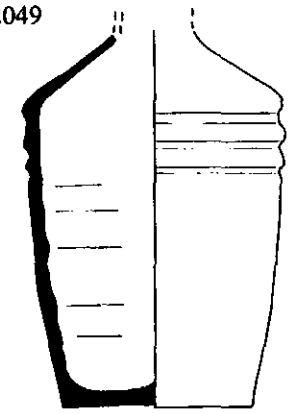
1

F2042



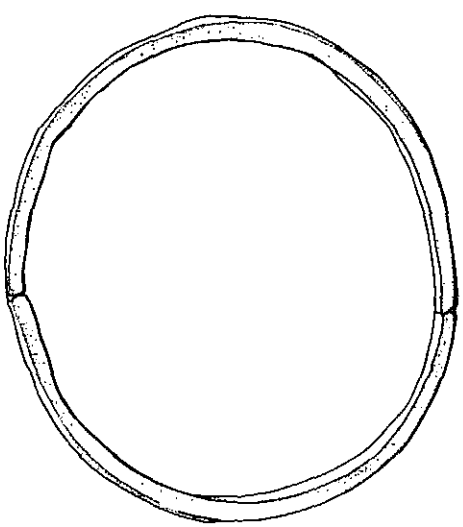
2

F2049

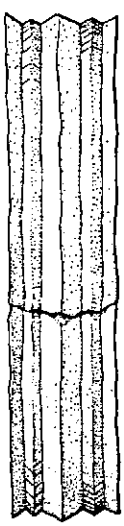


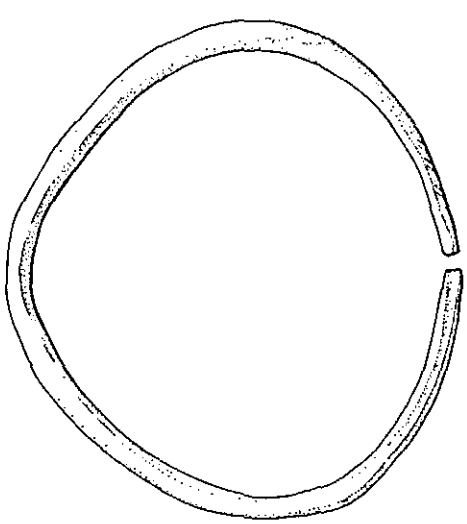
3

F2046



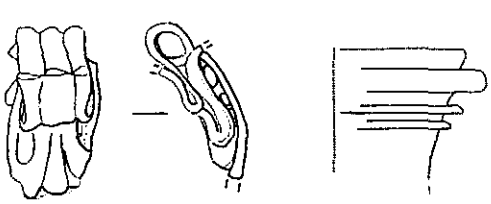
4



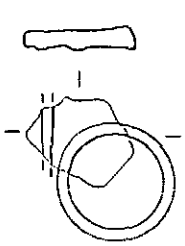


5

F2082

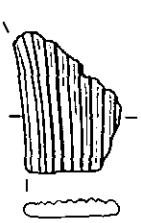


6

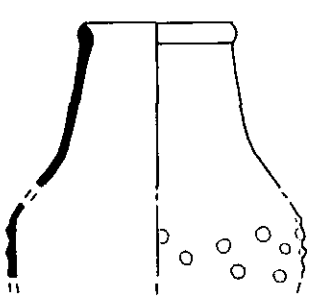


7

8



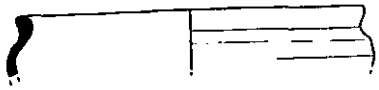
9



10

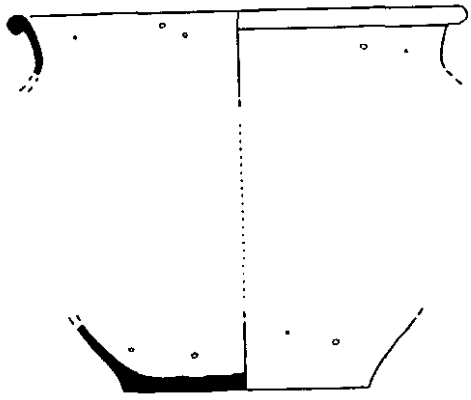
FIG 5.8

F2076



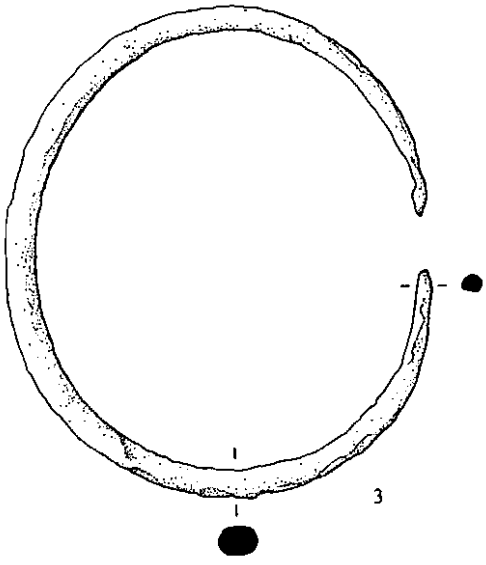
1

Cremation F2084

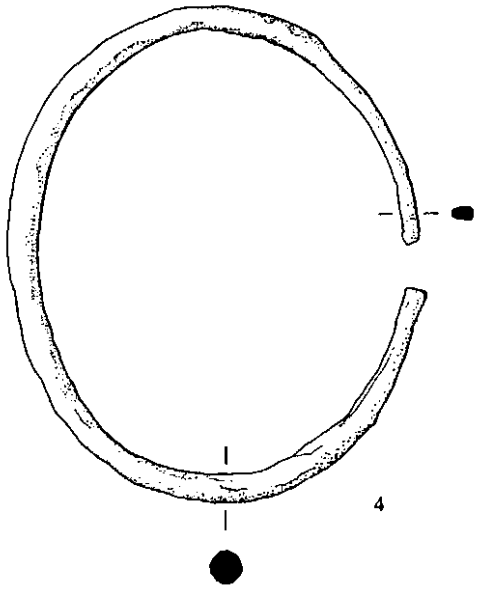


2

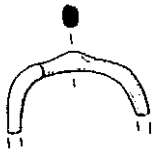
F2086



3



4



5

FIG 5.9

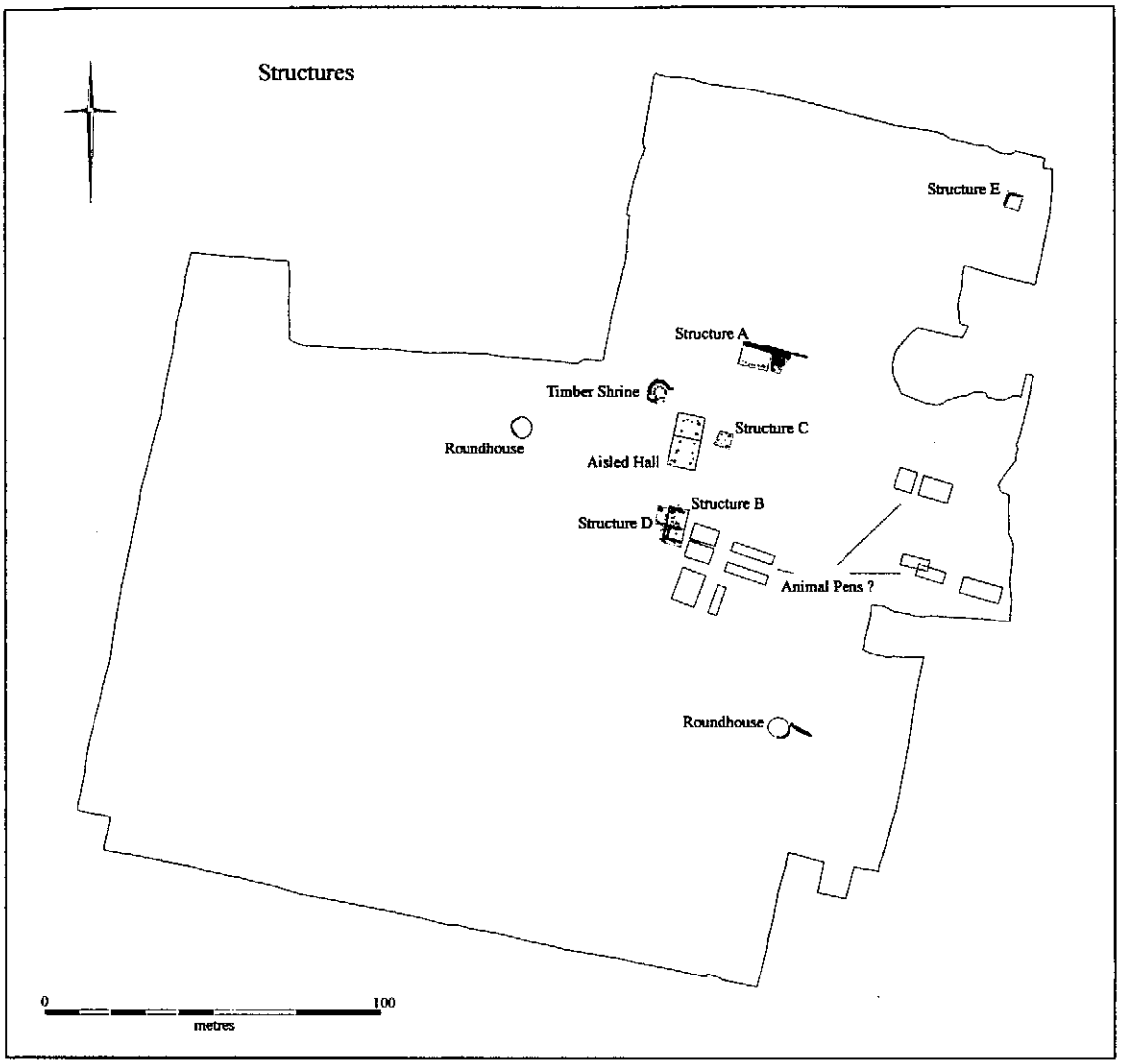

Structures
Structure E
Structure A
Timber Shrine
Structure C
Roundhouse
Aisled Hall
Structure B
Structure D
Animal Pens ?
Roundhouse
0
100
metres

FIG 6.1

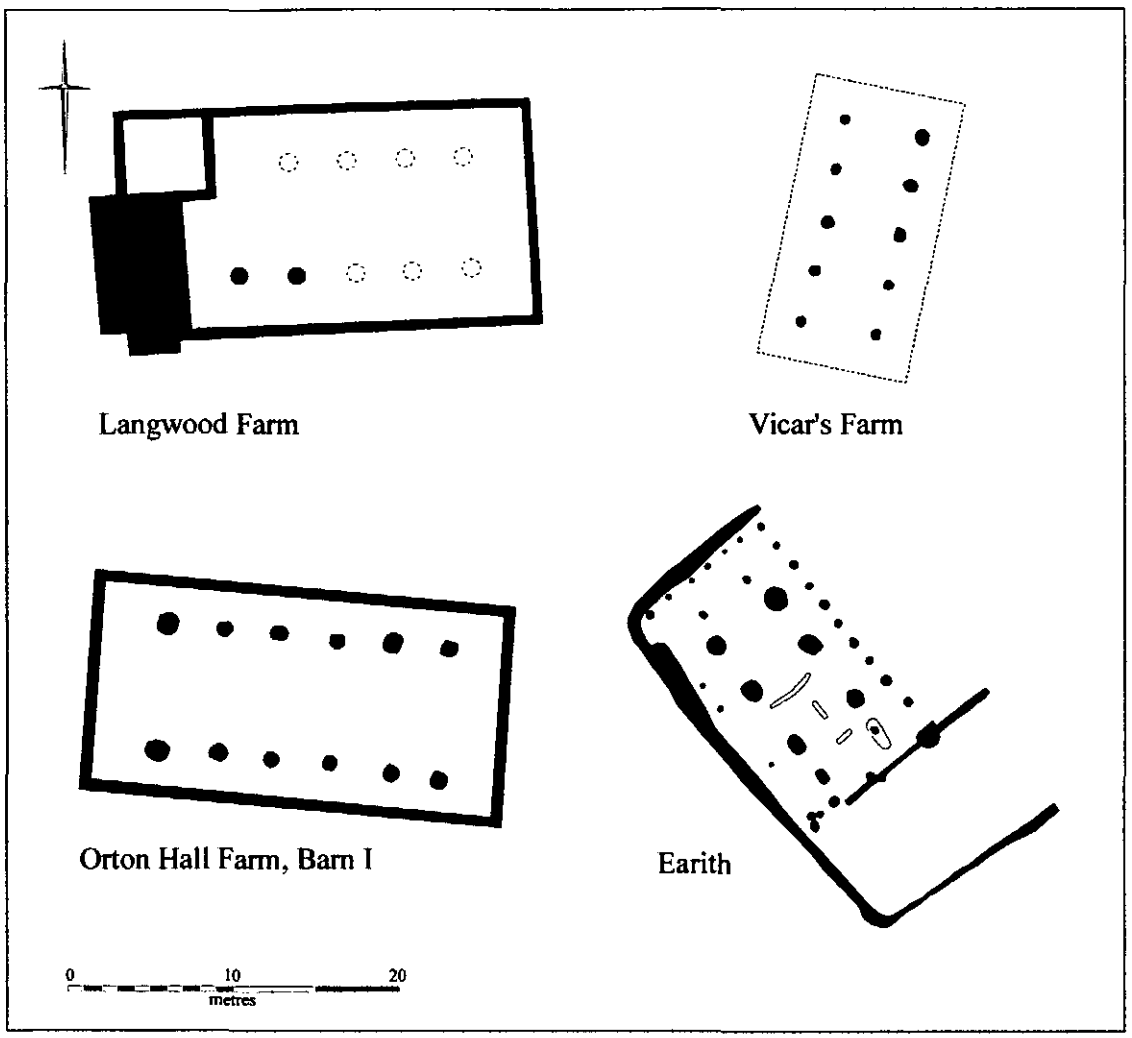

Langwood Farm
Vicar's Farm
Orton Hall Farm, Barn I
Earith
0
10
20
metres

FIG 6-2

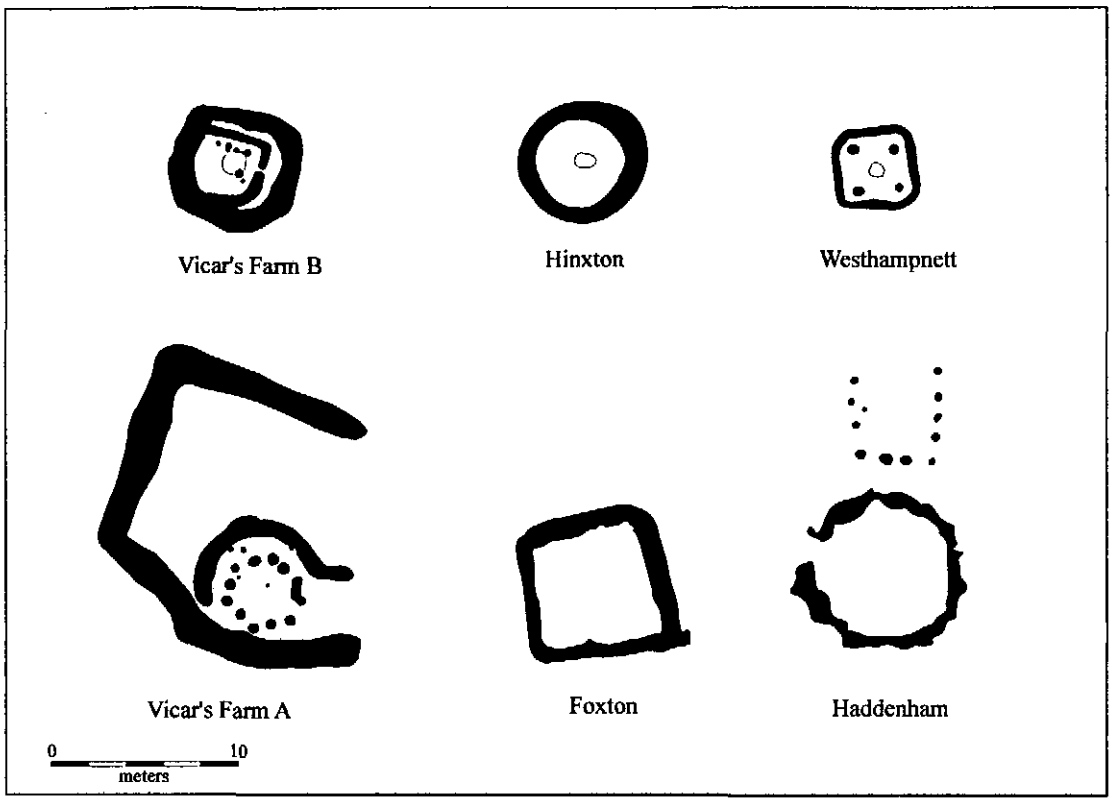

Vicar's Farm B
Hinxton
Westhampnett
Vicar's Farm A
Foxton
Haddenham
0
10
meters

FIG 6·3

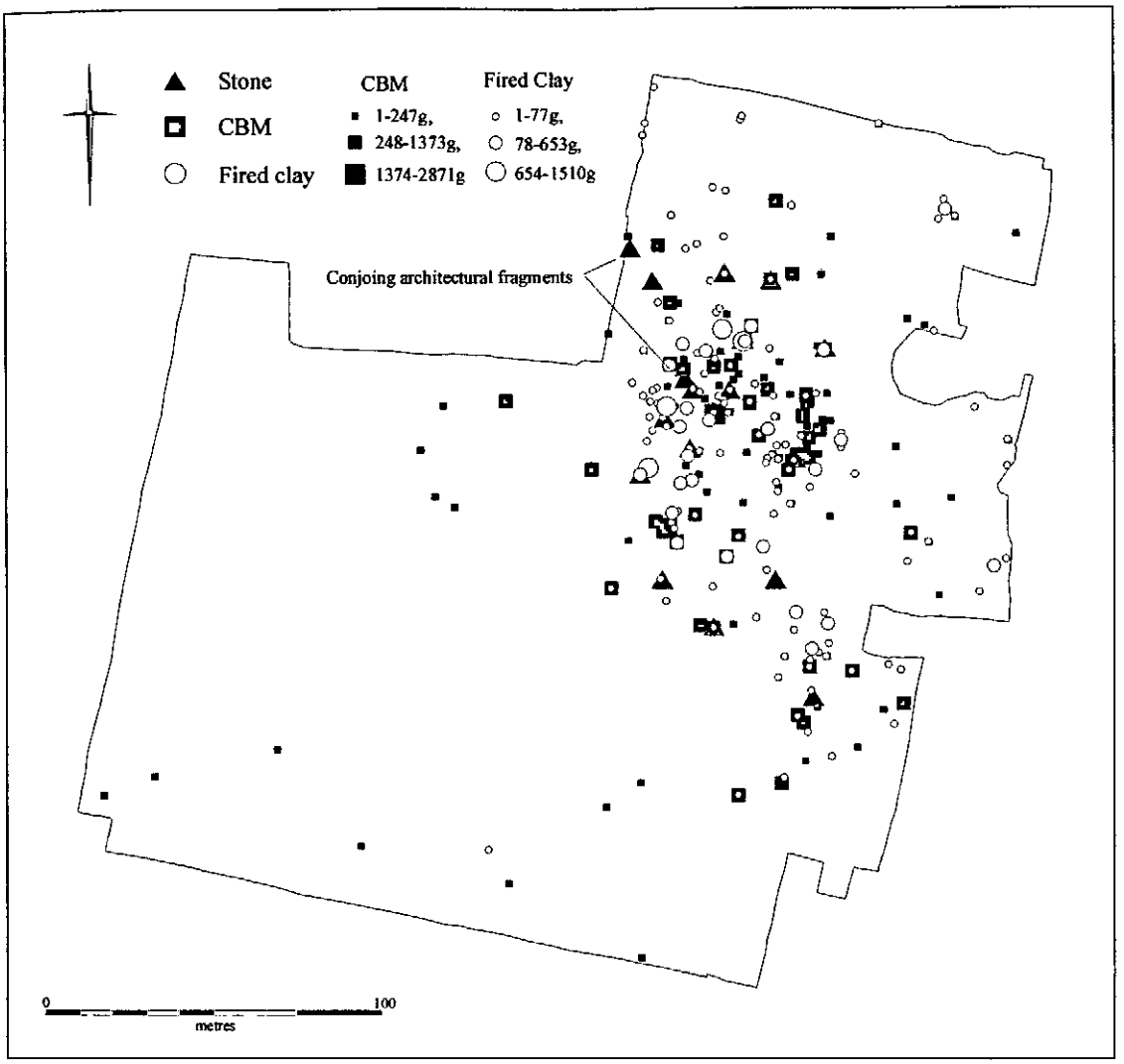
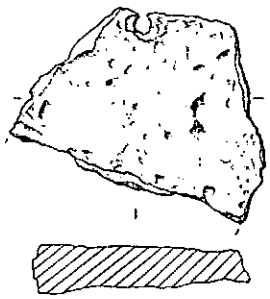
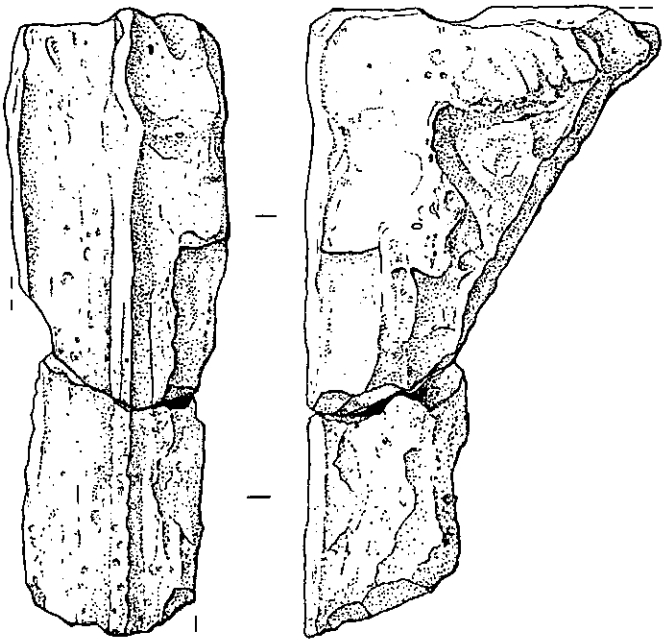

Stone
CBM
Fired clay
CBM
1-247g,
248-1373g,
1374-2871g
Fired Clay
1-77g,
78-653g,
654-1510g
Conjoing architectural fragments
0
100
metres

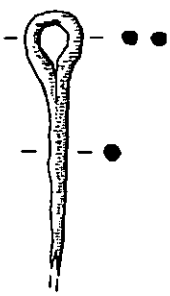
FIG 6.4



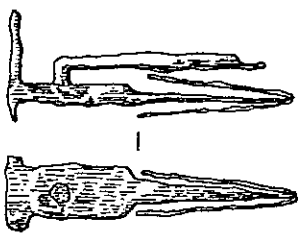
1



2



3



4

FIG 6.5

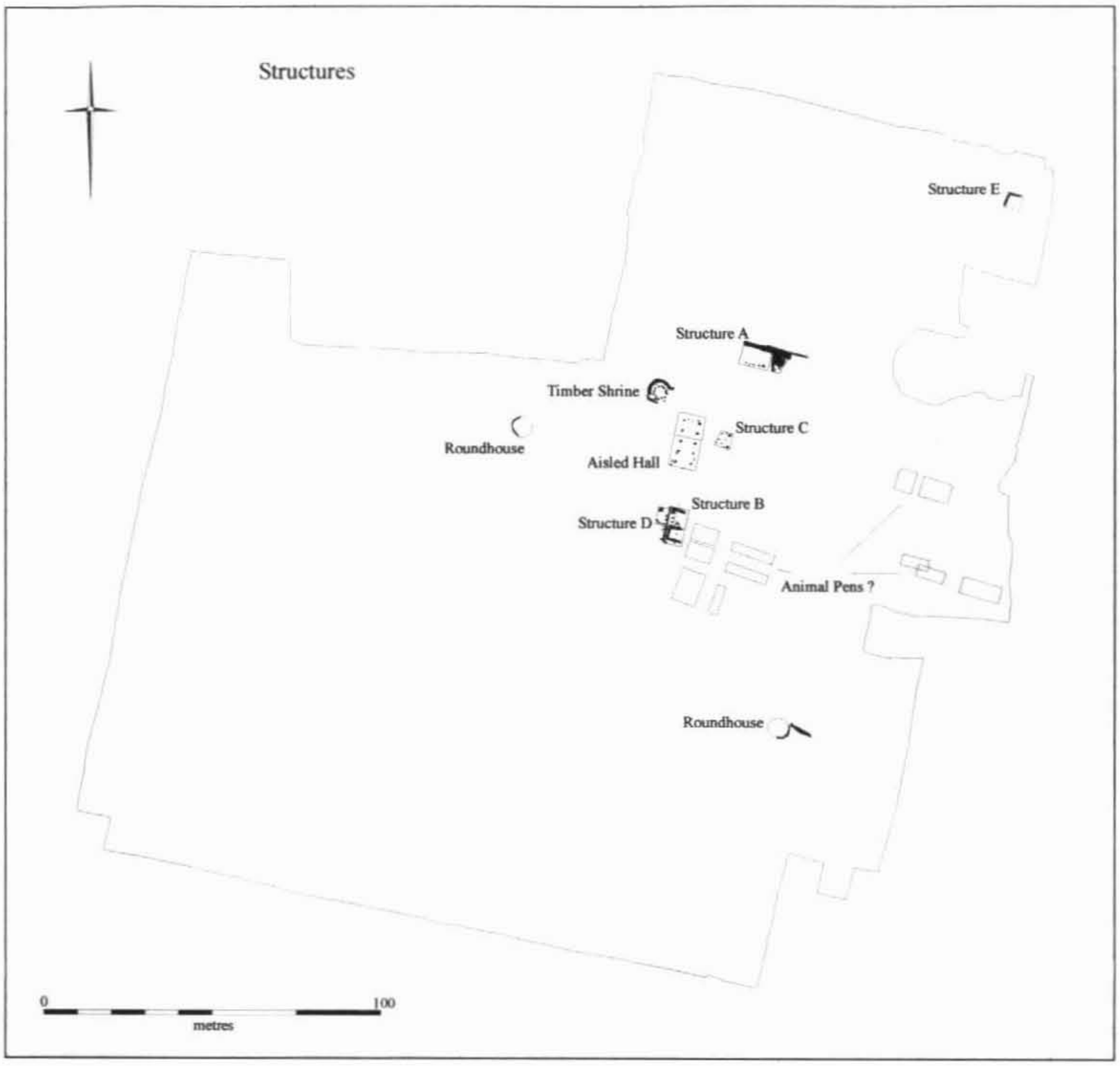

Structures
Structure E
Structure A
Timber Shrine
Structure C
Roundhouse
Aisled Hall
Structure B
Structure D
Animal Pens ?
Roundhouse
0
100
metres

FIG 6.1

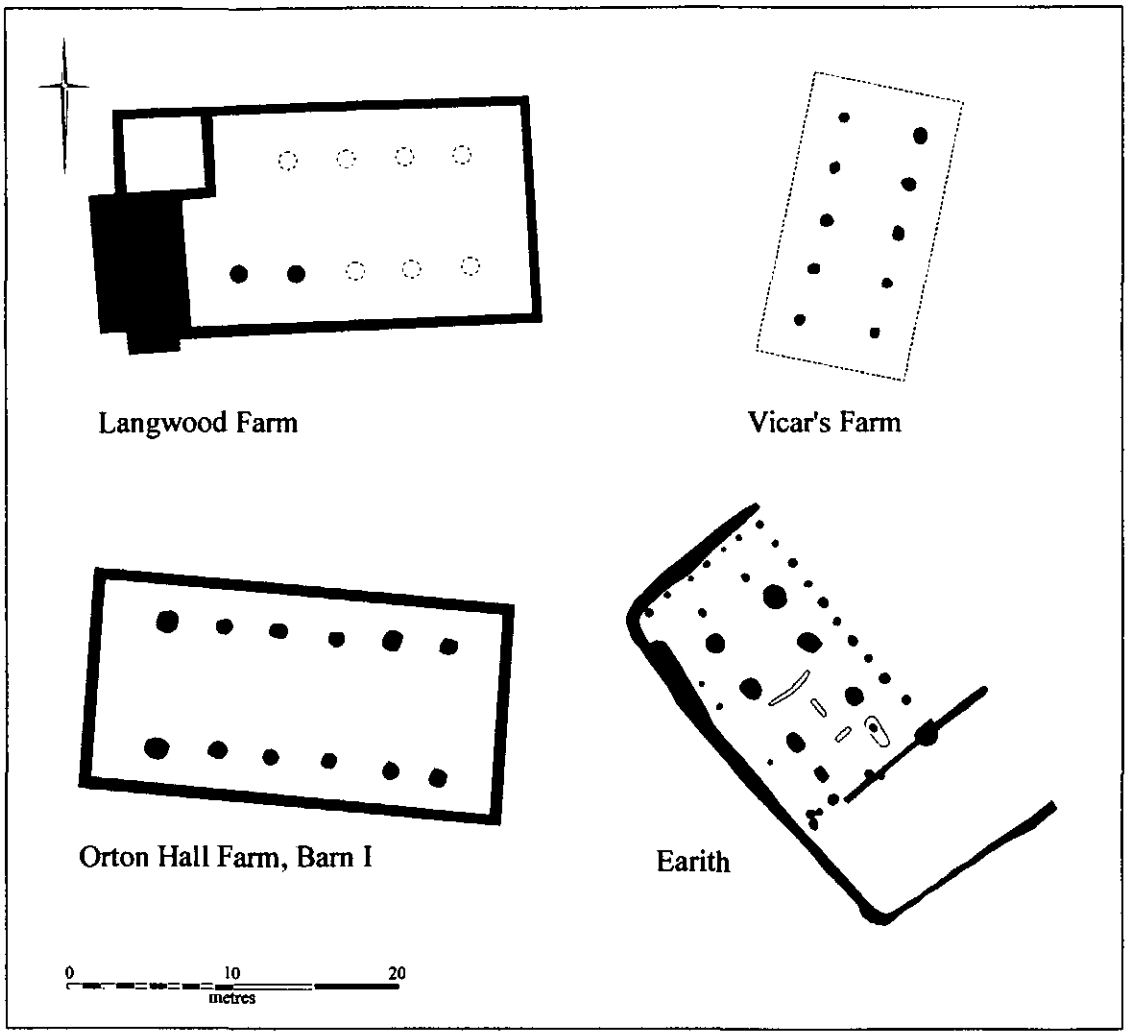

Langwood Farm
Vicar's Farm
Orton Hall Farm, Barn I
Earith
0
10
20
metres

FIG 6·2.

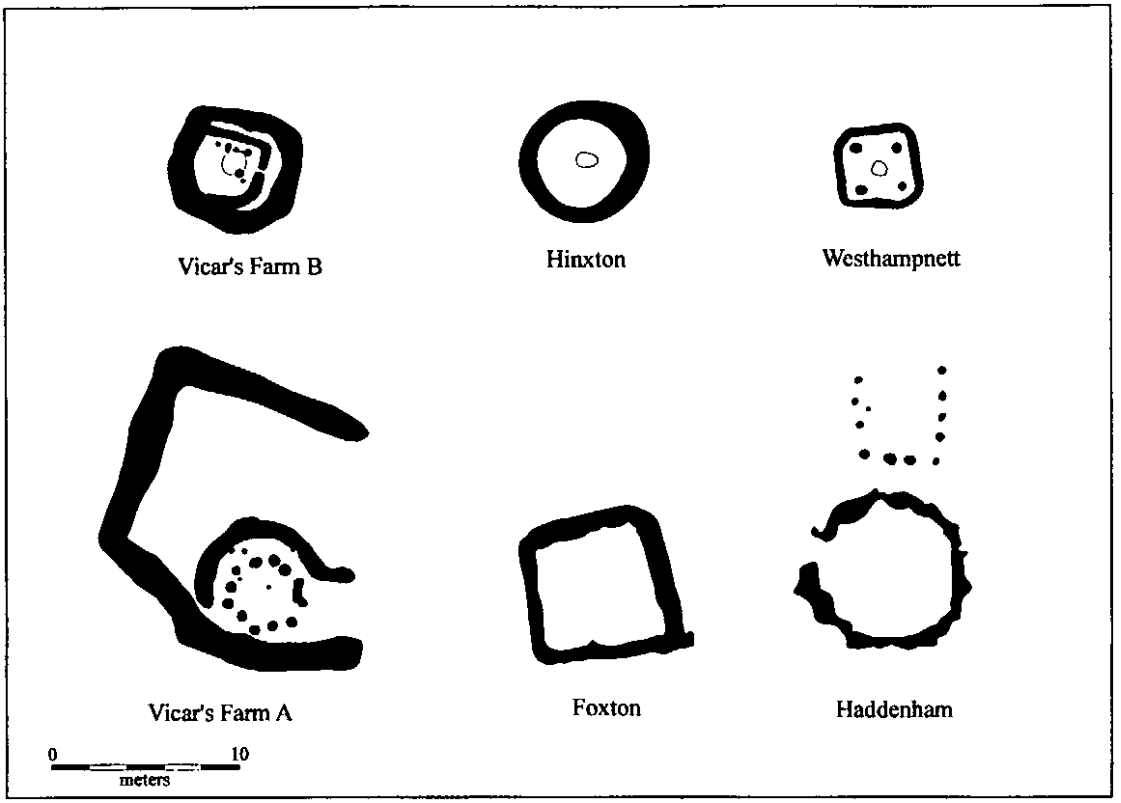

Vicar's Farm B
Hinxton
Westhampnett
Vicar's Farm A
Foxton
Haddenham
0
10
meters

FIG 6·3

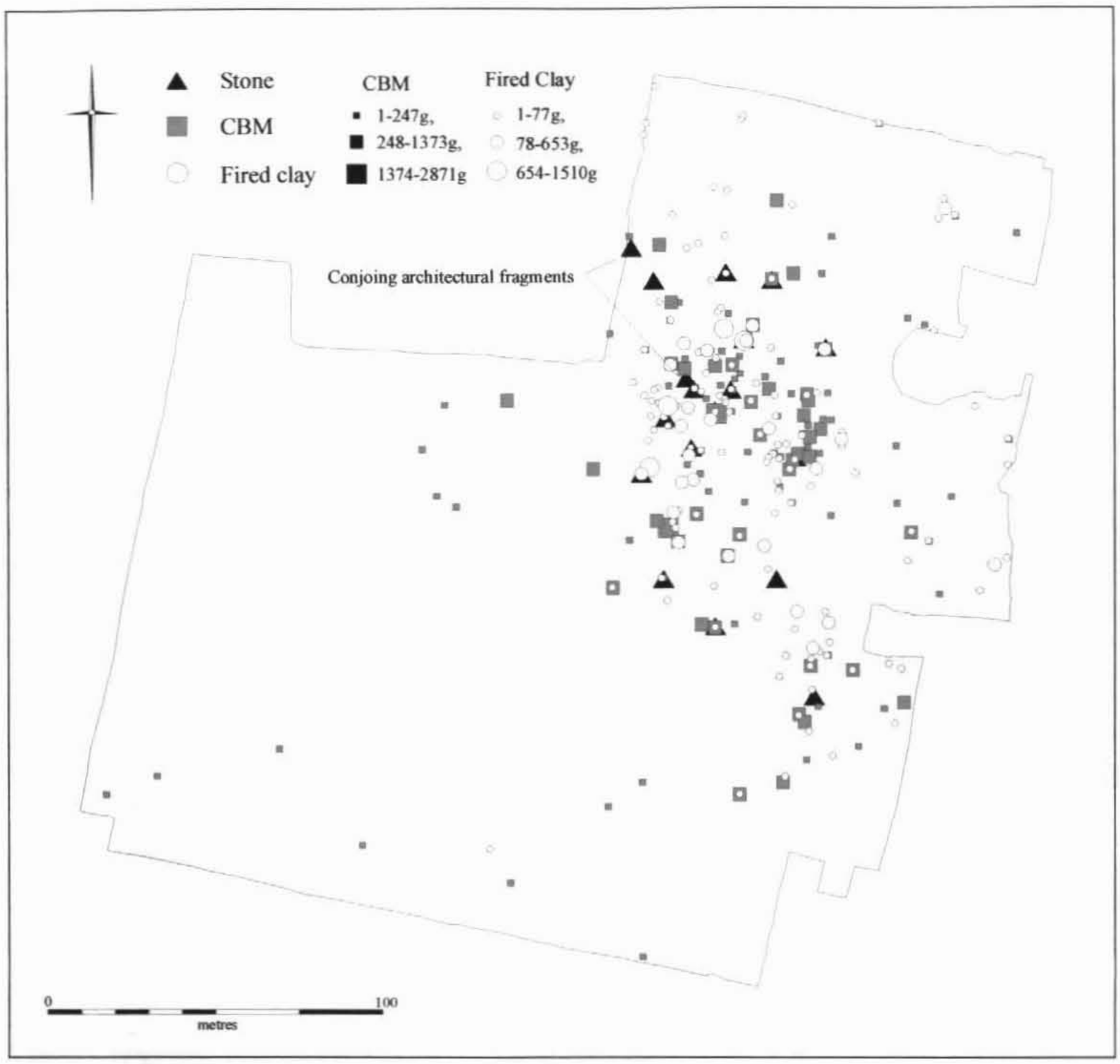
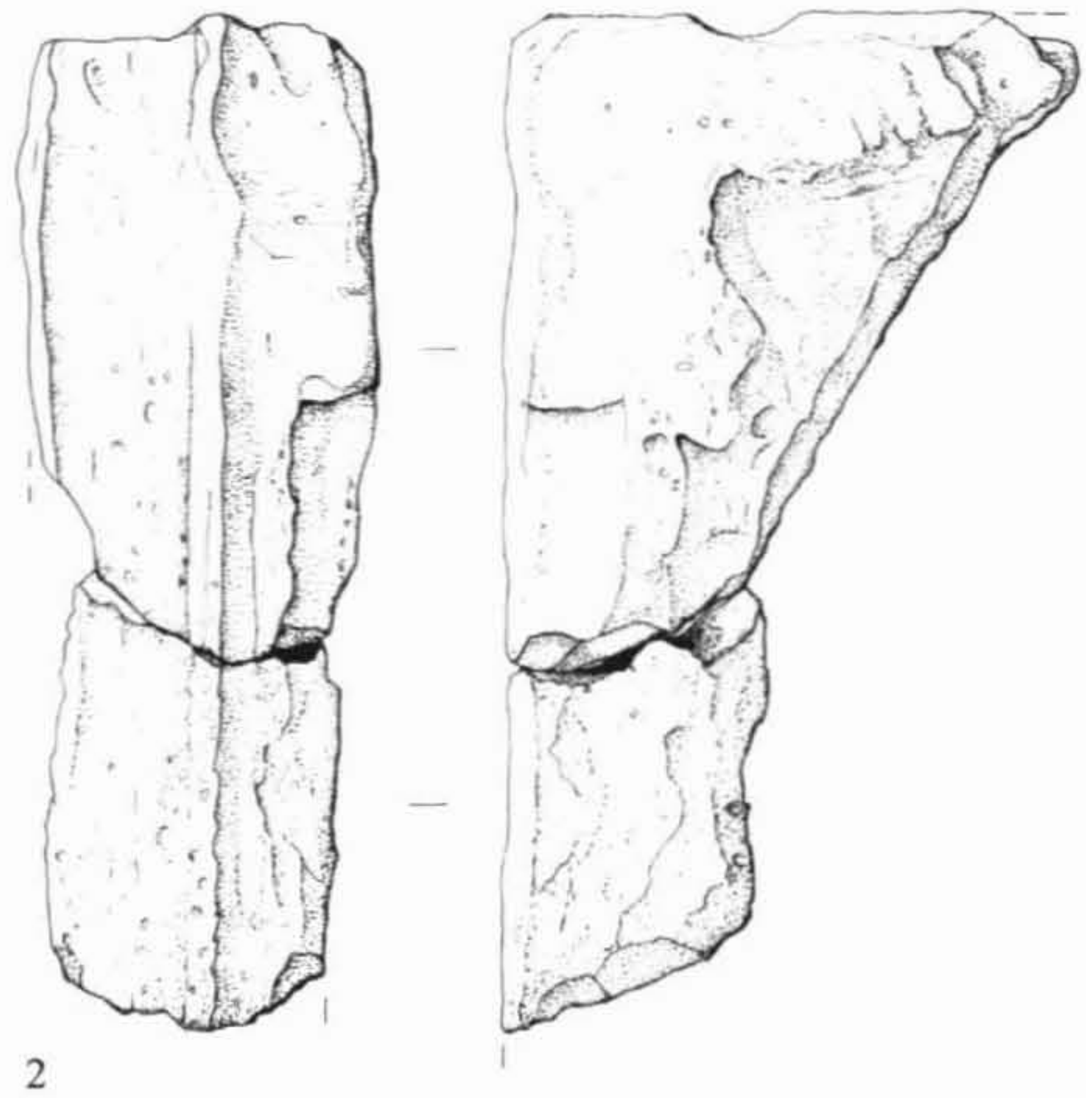
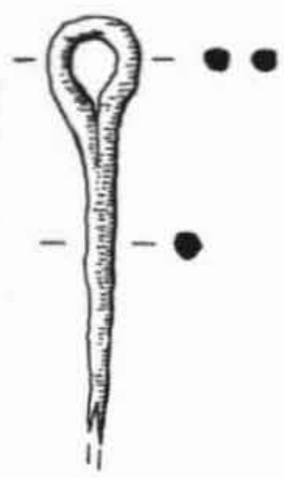

Stone
CBM
Fired clay
CBM
1-247g,
248-1373g,
1374-2871g
Fired Clay
1-77g,
78-653g,
654-1510g
Conjoing architectural fragments
0
100
metres

FIG 6.4

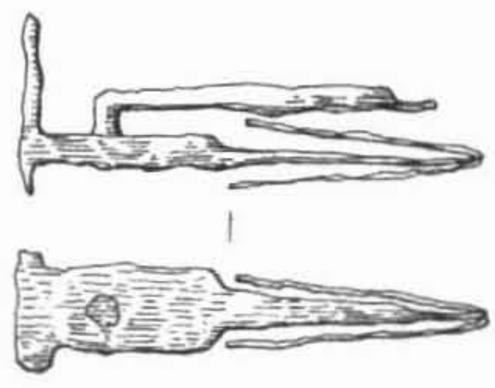
1



2



3



4

FIG 6.5

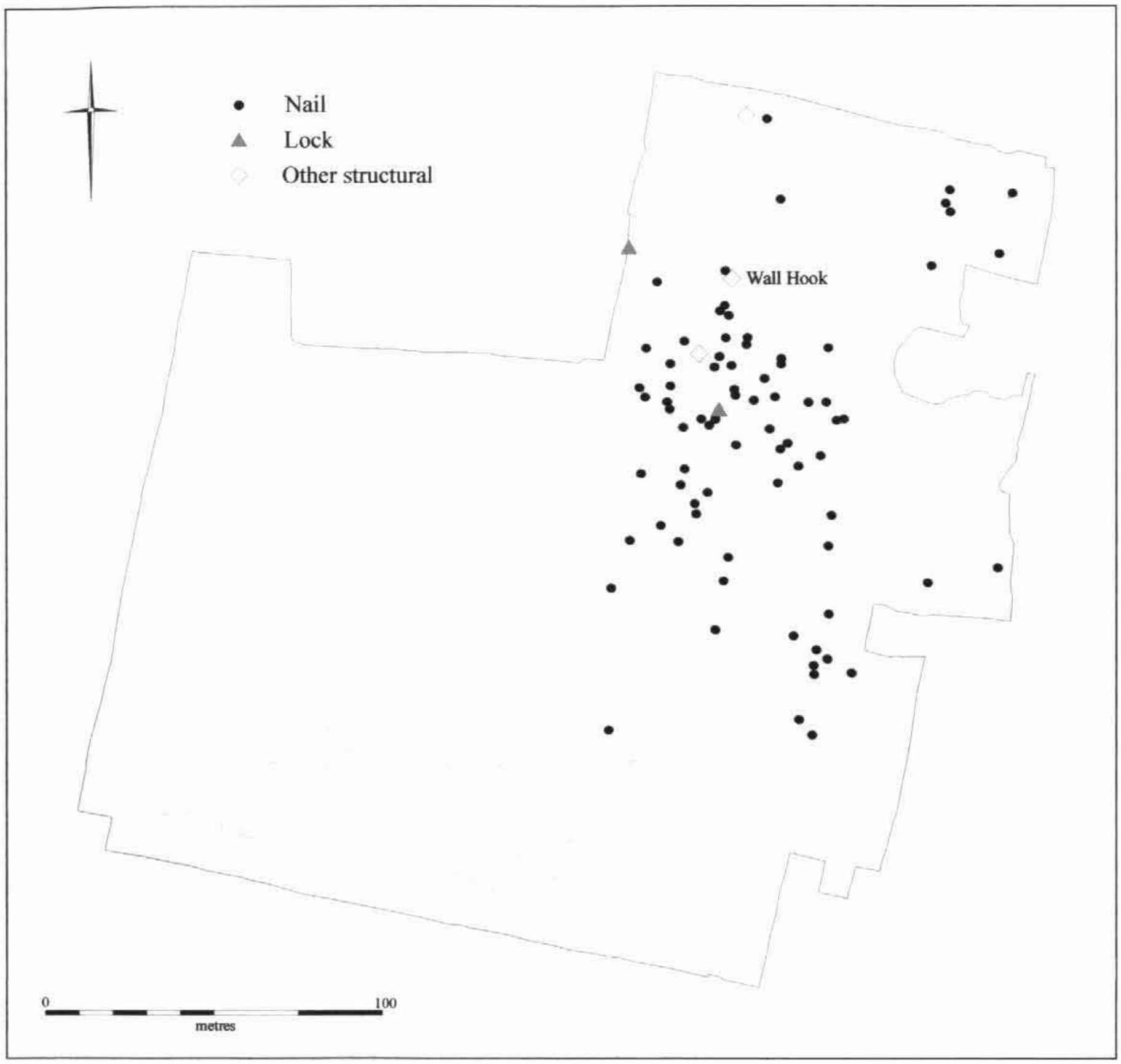


FIG 6.6

>2 sdev (0.9-1.63m deep)
1-2 sdev (0.61-0.9m deep)
< 1 sdev (0.1-0.6m deep)
0
100
metres

FIG 6.7

Pit Groups and Wells
Quarry pits
Cremation mound
Well
Well group
Well group
Well
Well group
Well
0
100
metres

FIG 6.8

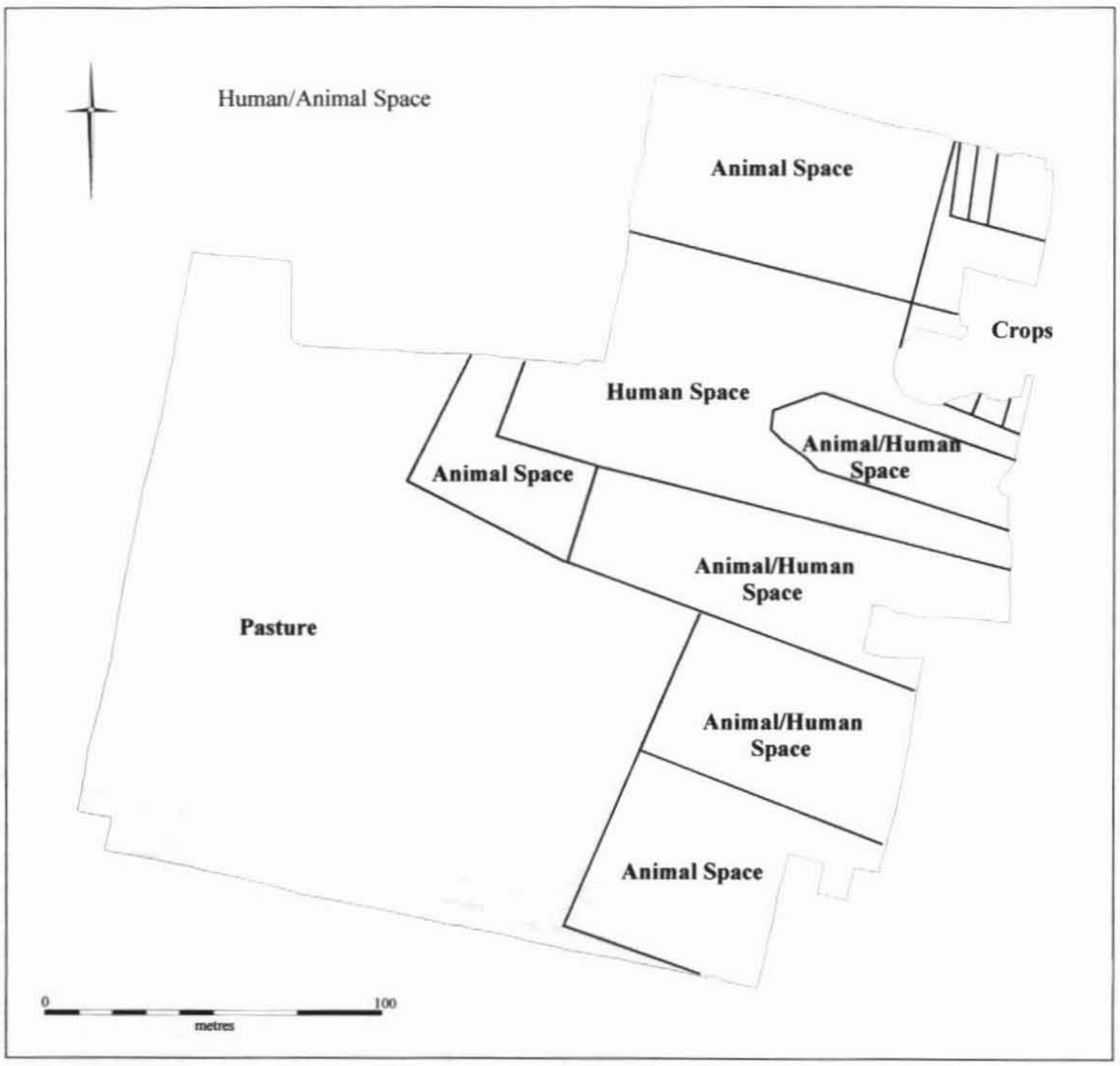

Human/Animal Space
Animal Space
Crops
Human Space
Animal/Human Space
Animal Space
Animal/Human Space
Pasture
Animal/Human Space
Animal Space
0
100
metres

FIG 6.9

Phosphate readings
0 - 49 mg.P per 100g. soil
50 - 99 mg.P per 100g. soil
100 - 149 mg.P per 100g. soil
150 - 199 mg.P per 100g. soil
200 - 249 mg.P per 100g. soil
250 - 299 mg.P per 100g. soil
0
100
metres

FIG 6.10

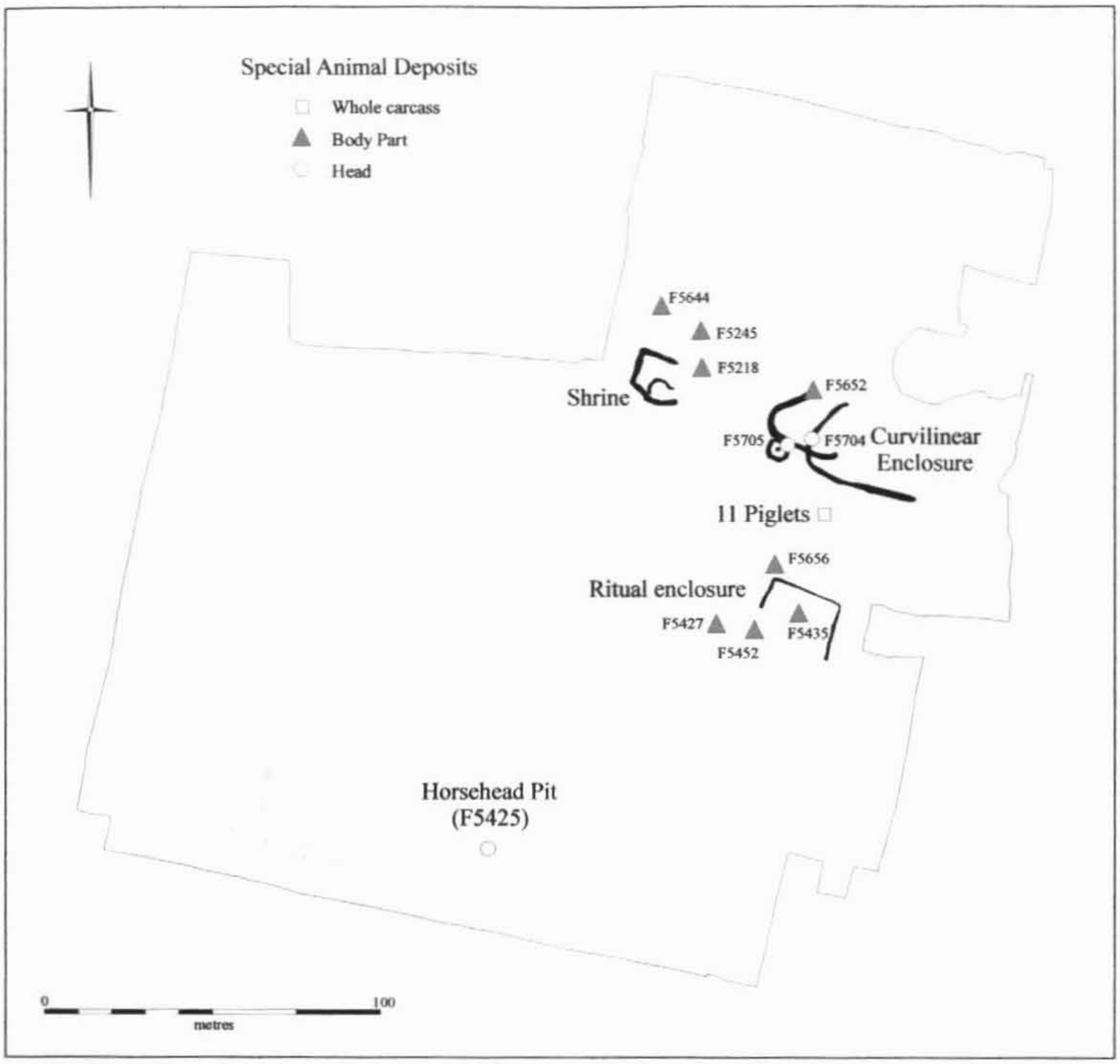
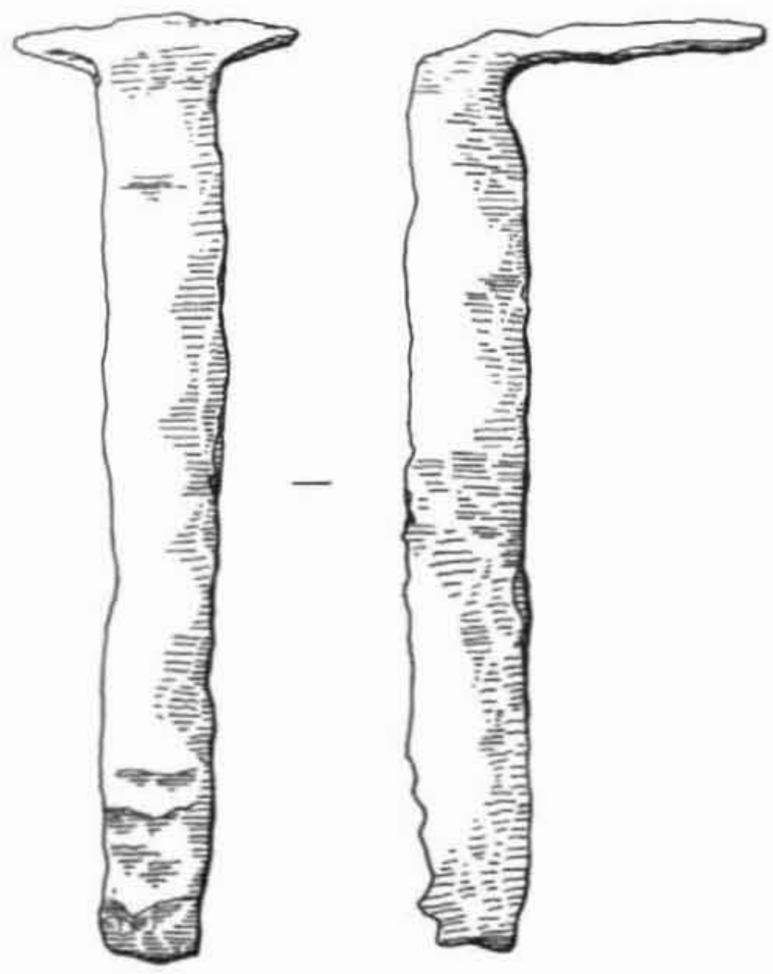
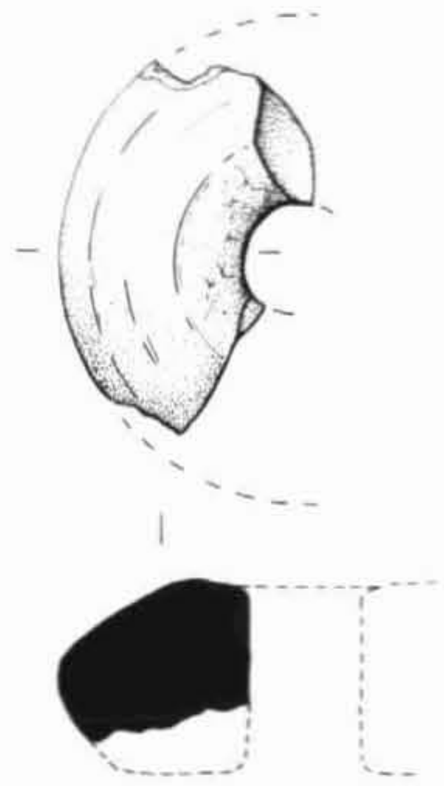

Special Animal Deposits
Whole carcass
Body Part
Head
F5644
F5245
F5218
Shrine
F5652
F5705
F5704
Curvilinear Enclosure
11 Piglets
F5656
Ritual enclosure
F5427
F5452
F5435
Horsehead Pit
(F5425)
0
100
metres

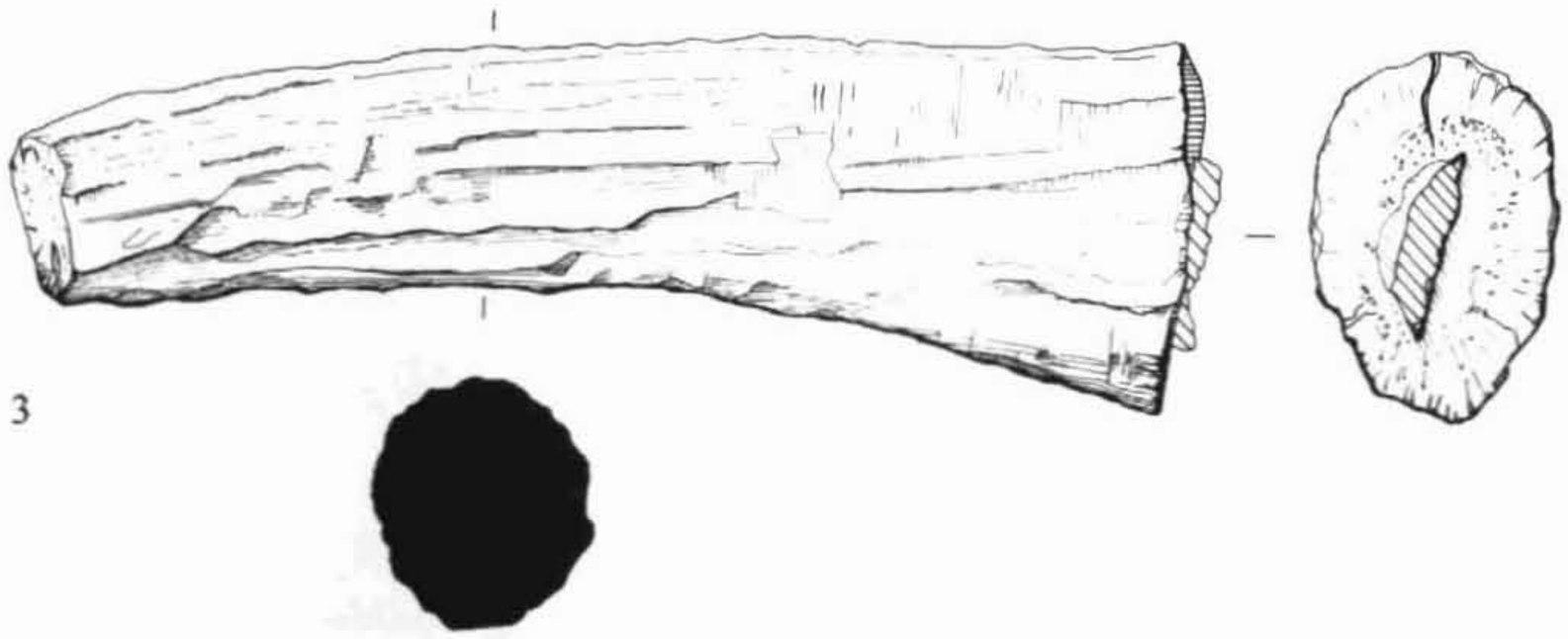
FIG 6.11



1



2



3

FIG 6.12.

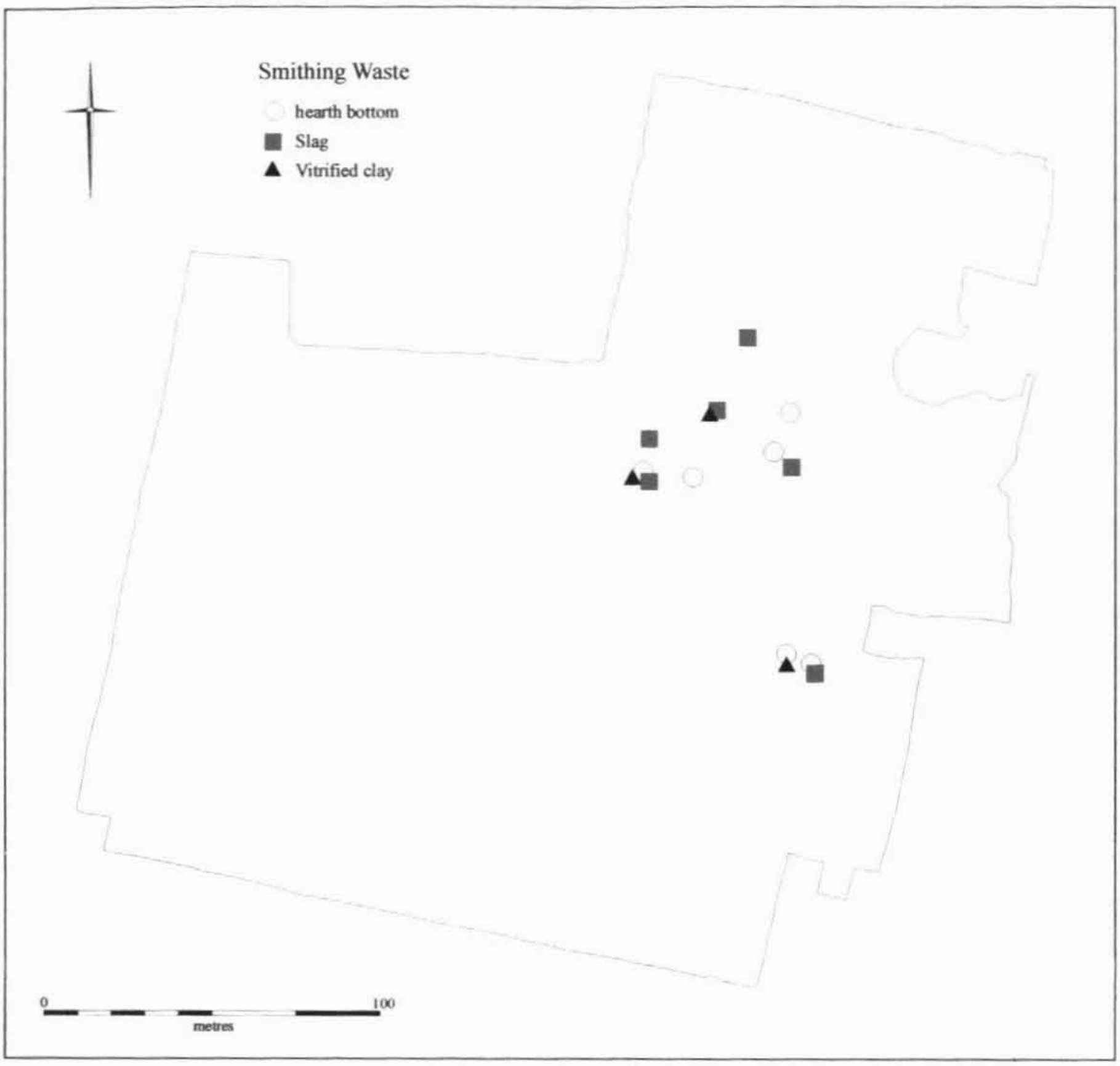

Smithing Waste
hearth bottom
Slag
Vitrified clay
0
100
metres

FIG 6.13

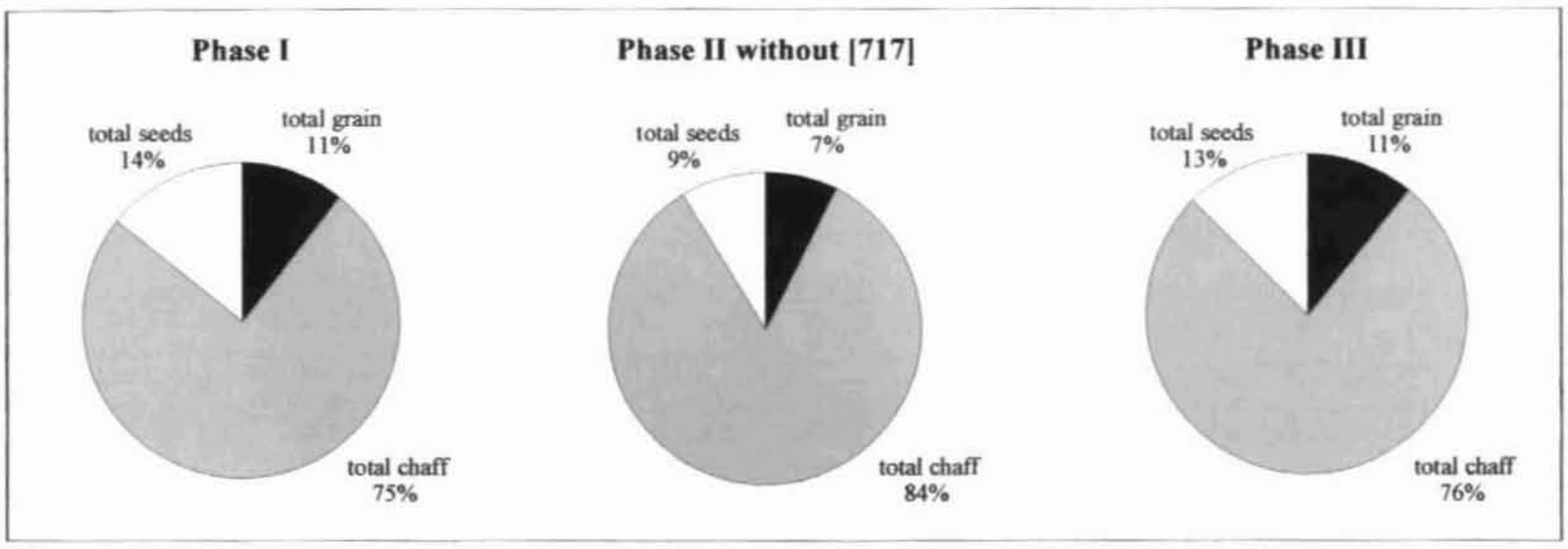

Phase I
total seeds
14%
total grain
11%
total chaff
75%
Phase II without [717]
total seeds
9%
total grain
7%
total chaff
84%
Phase III
total seeds
13%
total grain
11%
total chaff
76%

FIG 6.14

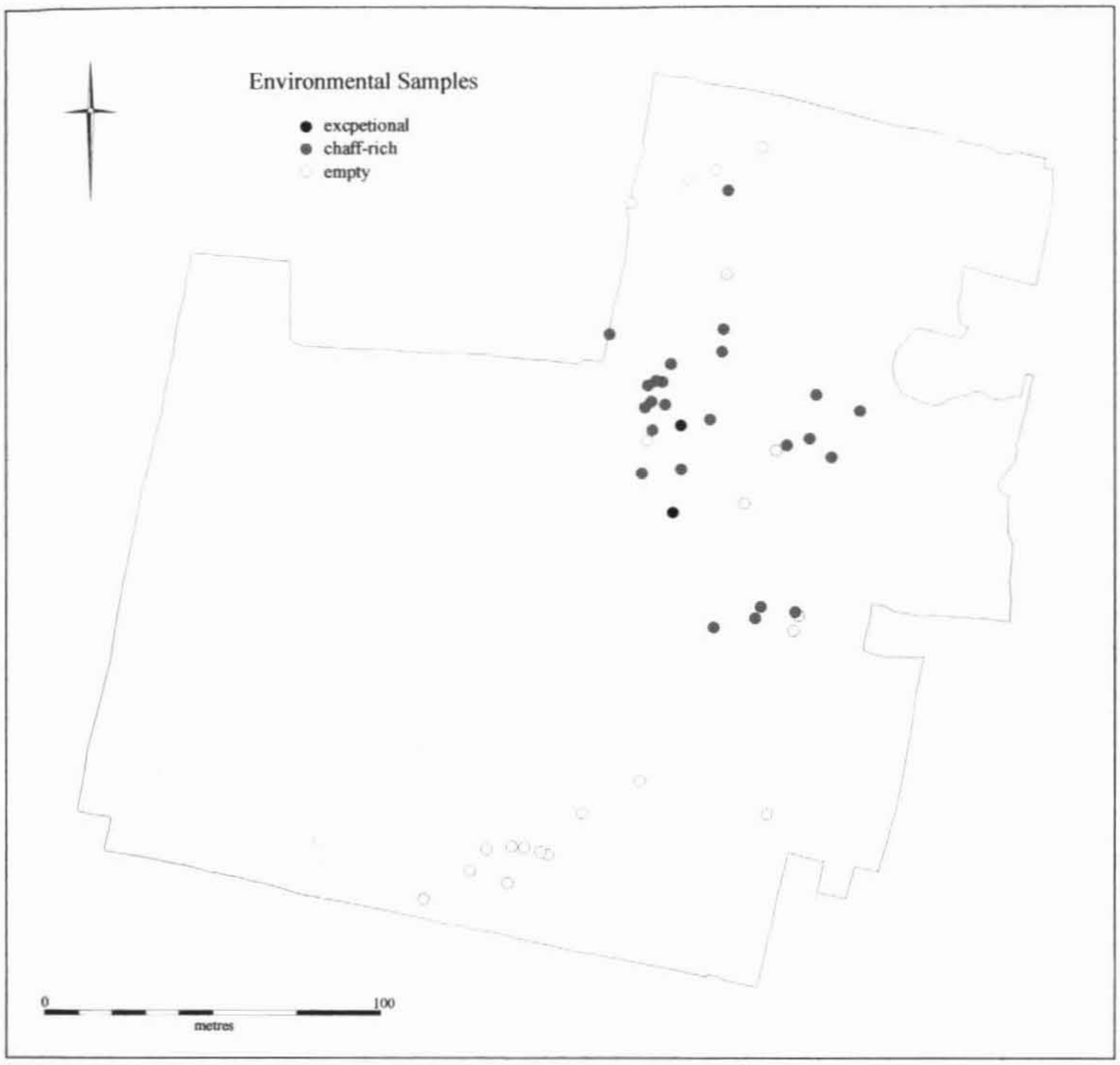

Environmental Samples
excpetional
chaff-rich
empty
0
100
metres

FIG 6.15

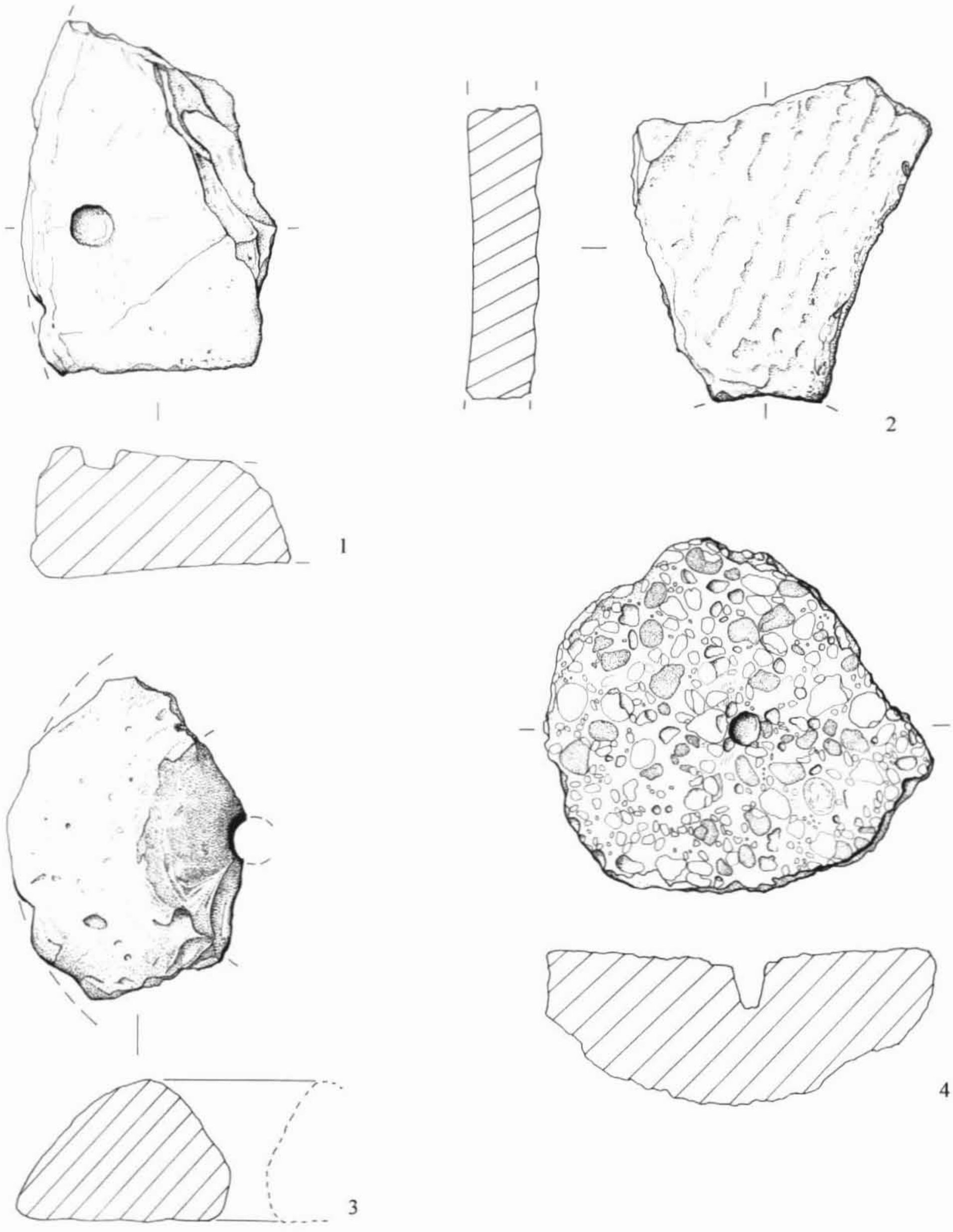


FIG 6.16

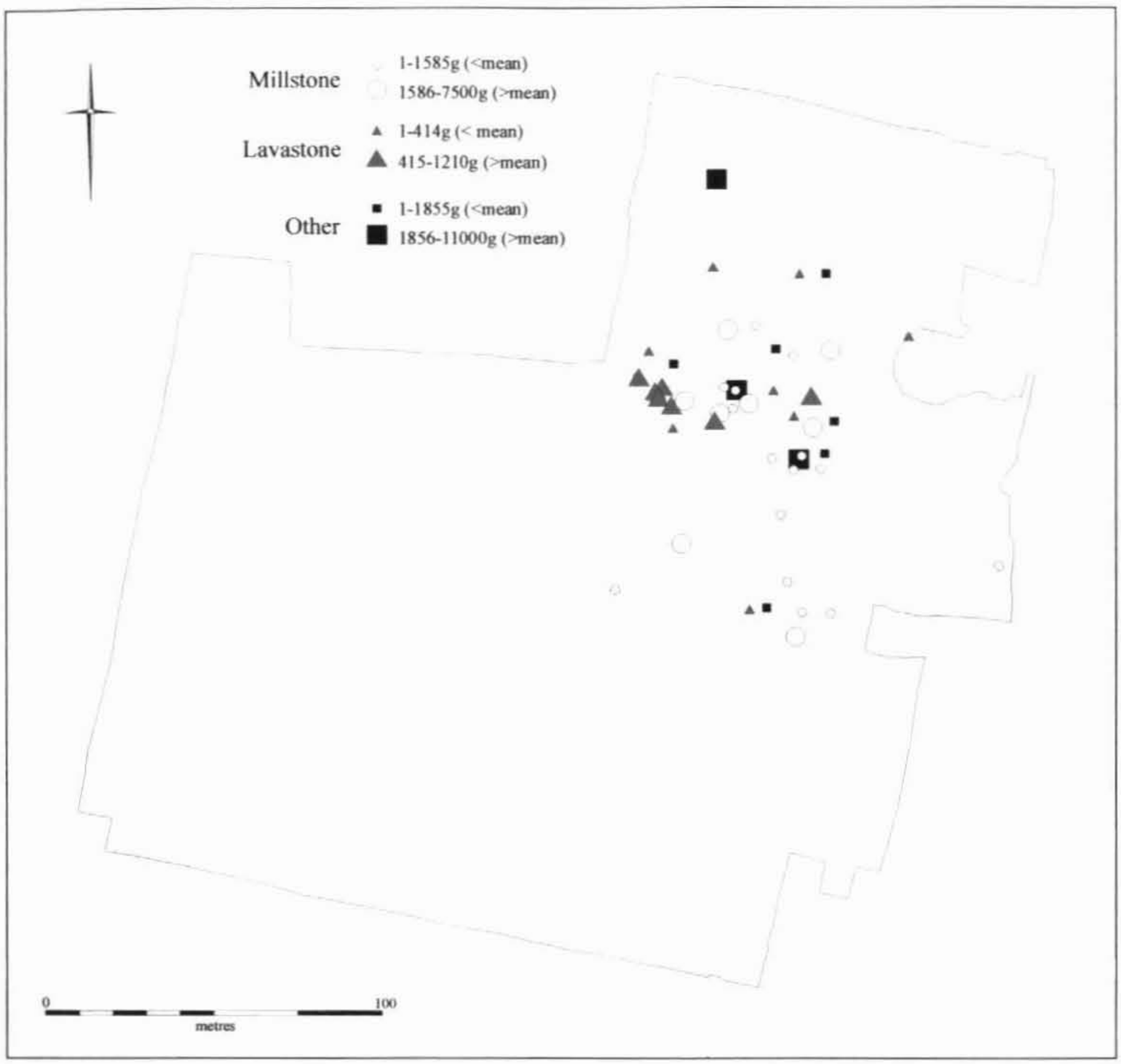

Millstone
1-1585g (<mean)
1586-7500g (>mean)
Lavastone
1-414g (< mean)
415-1210g (>mean)
Other
1-1855g (<mean)
1856-11000g (>mean)
0
100
metres

FIG 6.17

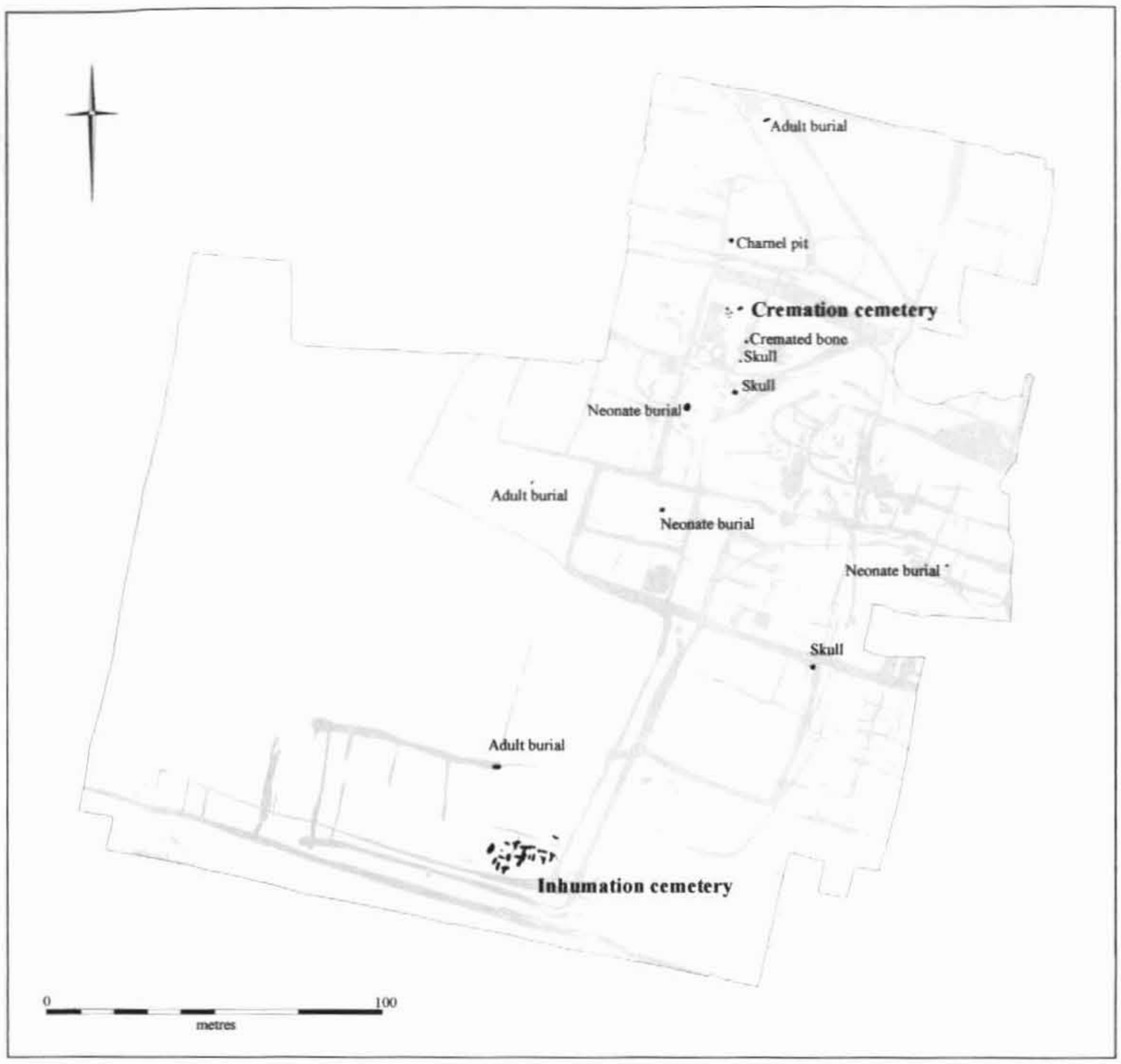

Adult burial
Charnel pit
Cremation cemetery
Cremated bone
Skull
Skull
Neonate burial
Adult burial
Neonate burial
Neonate burial
Skull
Adult burial
Inhumation cemetery
0
100
metres

FIG 6.18

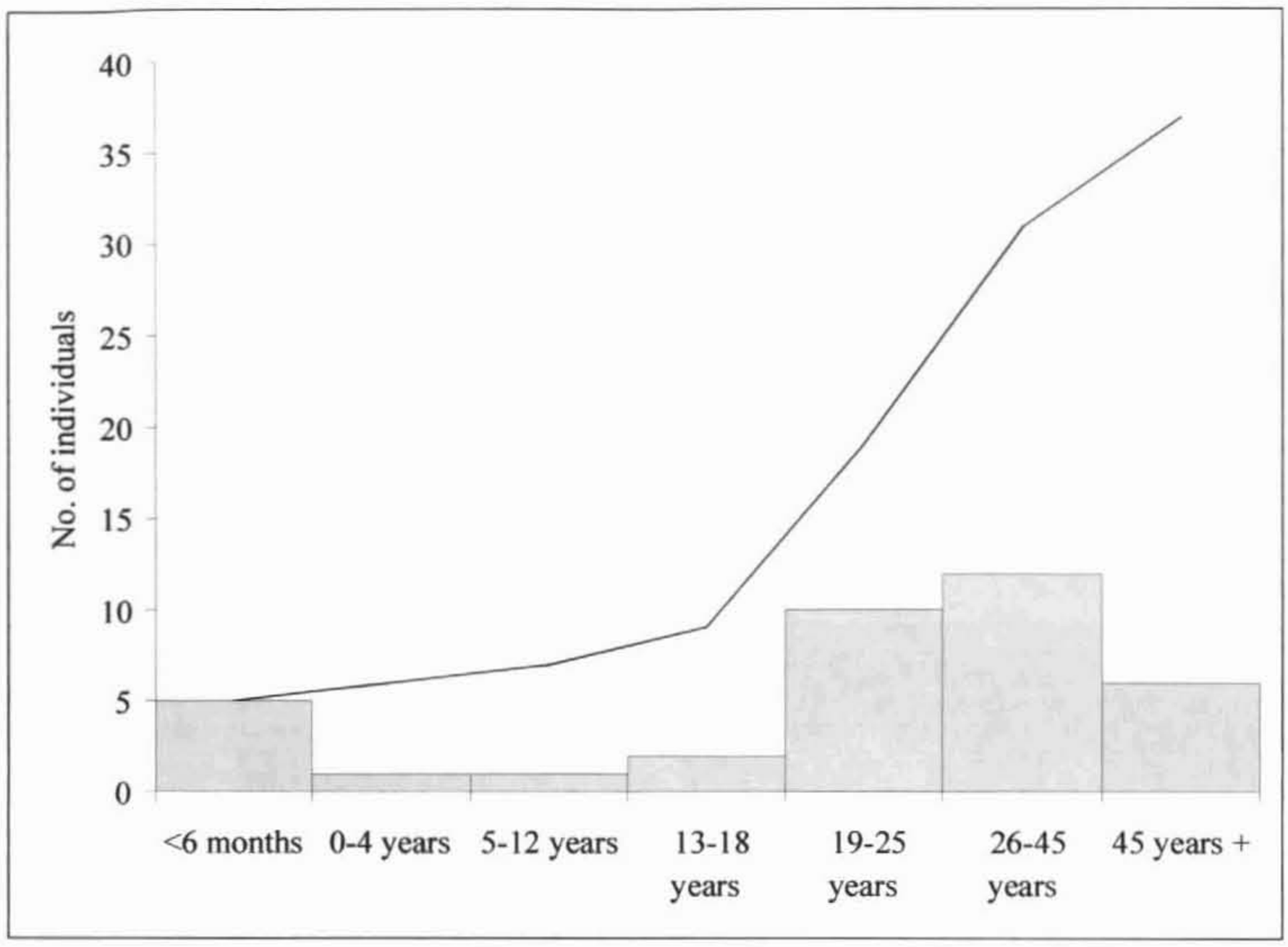
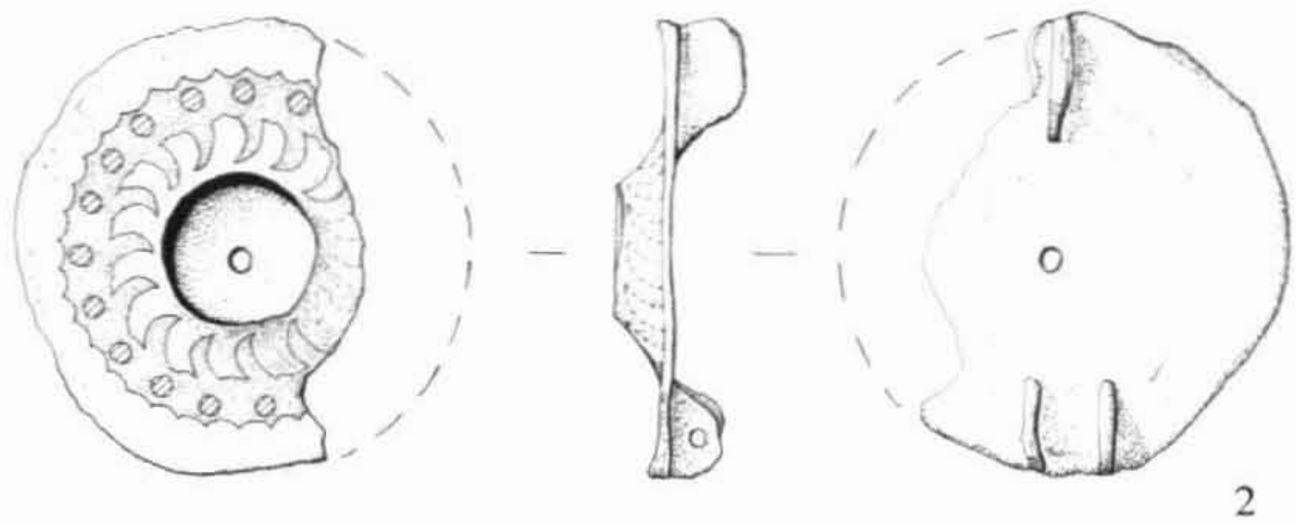
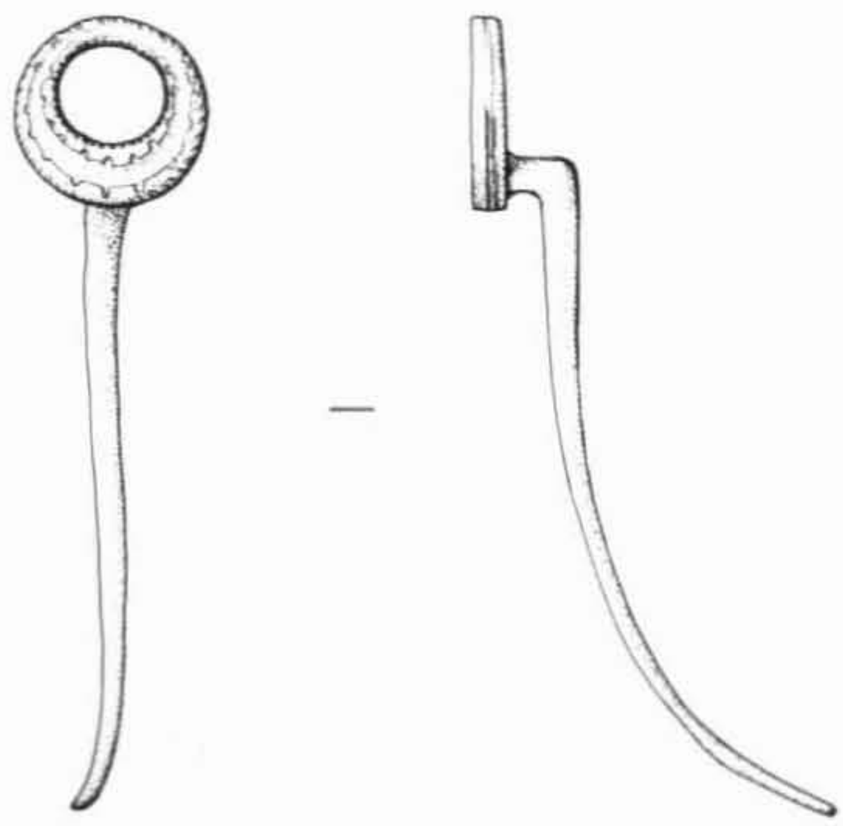

40
35
30
25
20
15
10
5
0
No. of individuals
<6 months
0-4 years
5-12 years
13-18 years
19-25 years
26-45 years
45 years +

FIG 6.19

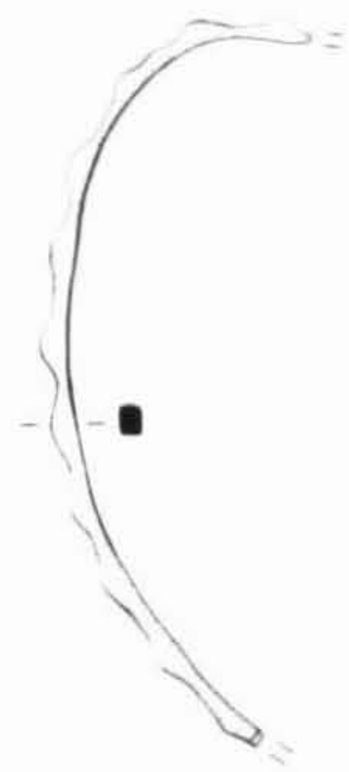
1



2



3

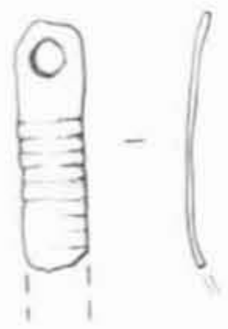


4

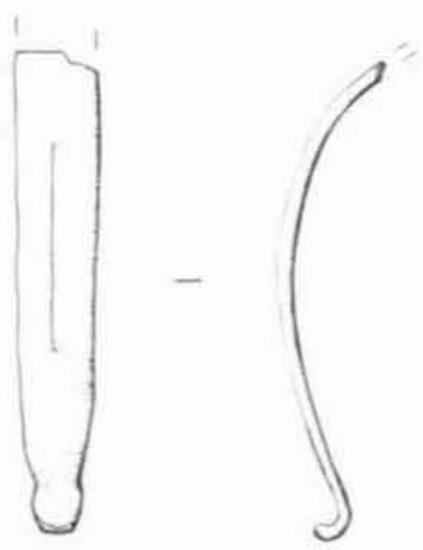
5

6

FIG 6.20

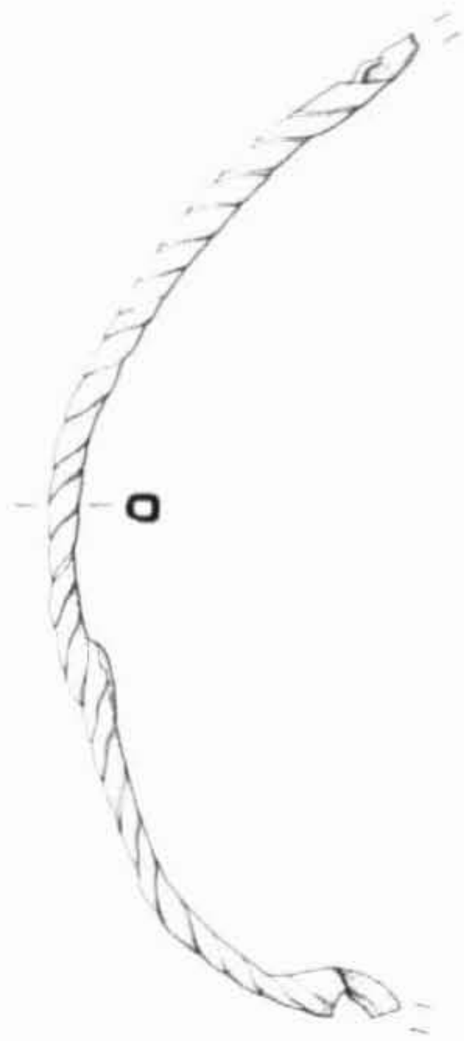


1



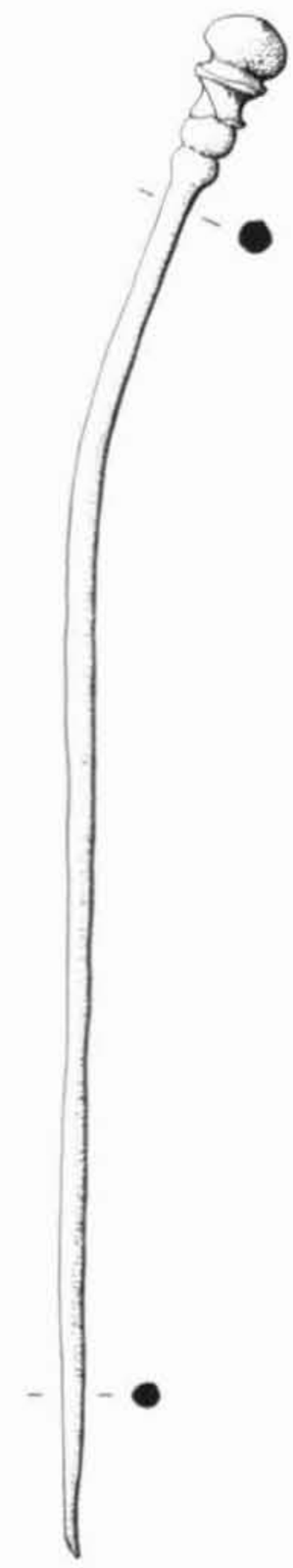
2

3

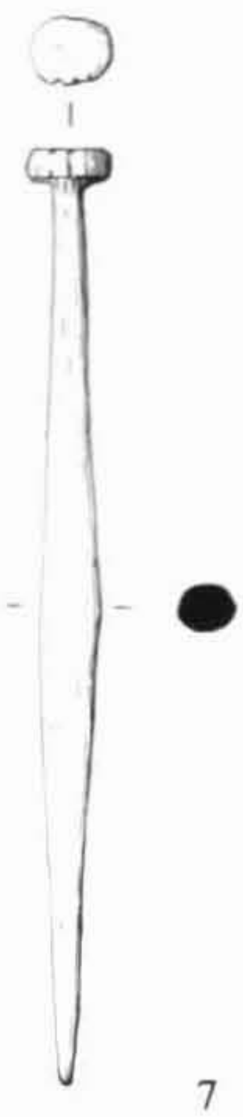


4

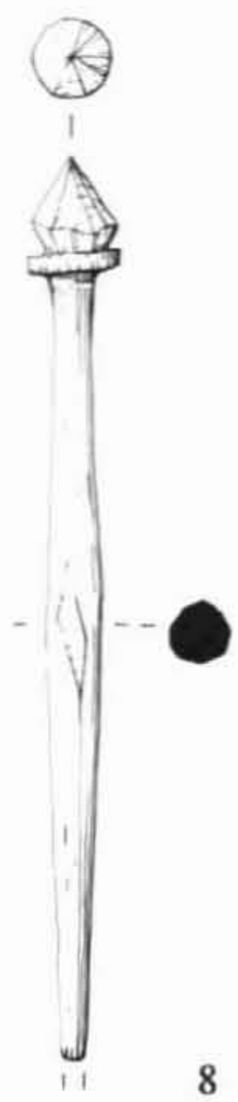
5



6

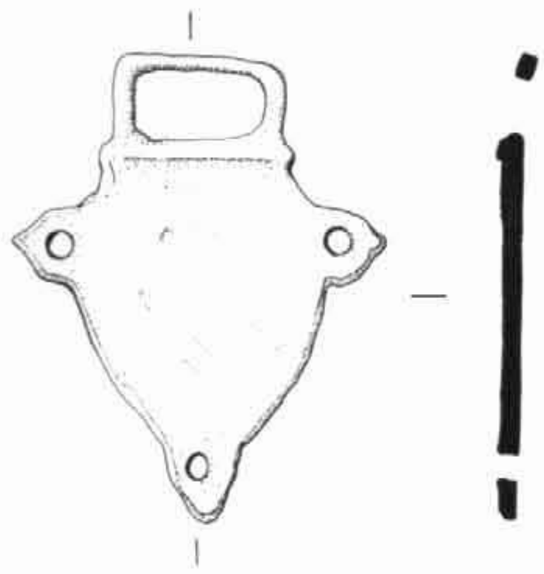


7



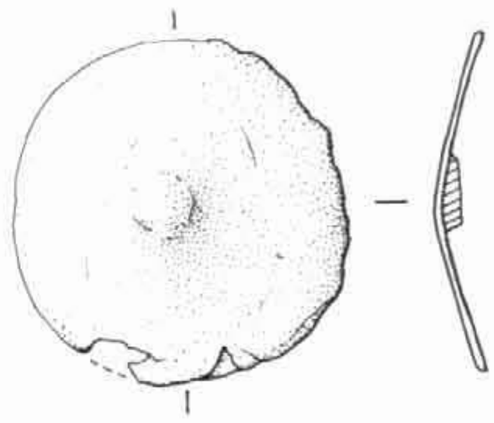
8

FIG 6·21



1

2



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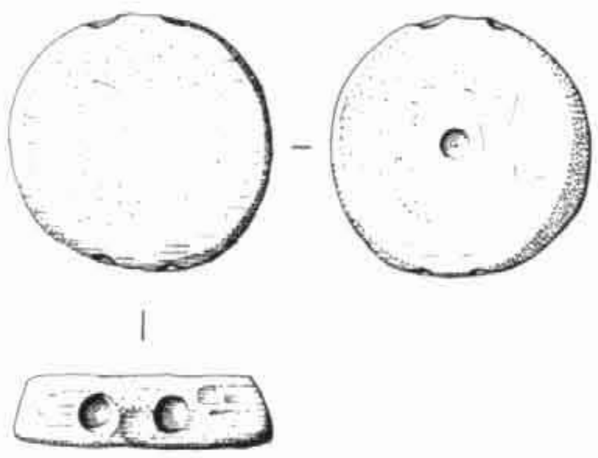
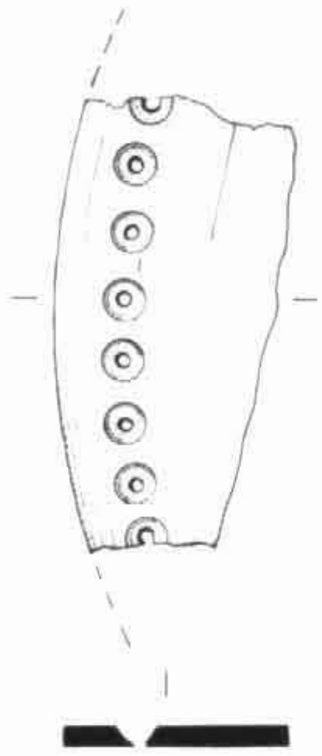
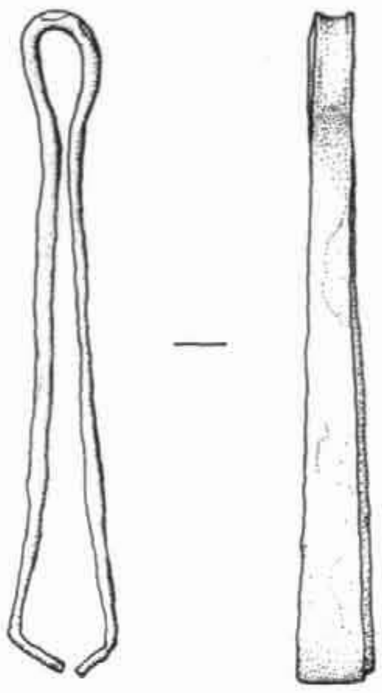


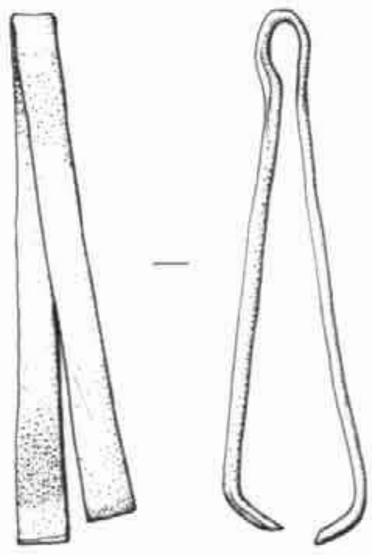
4



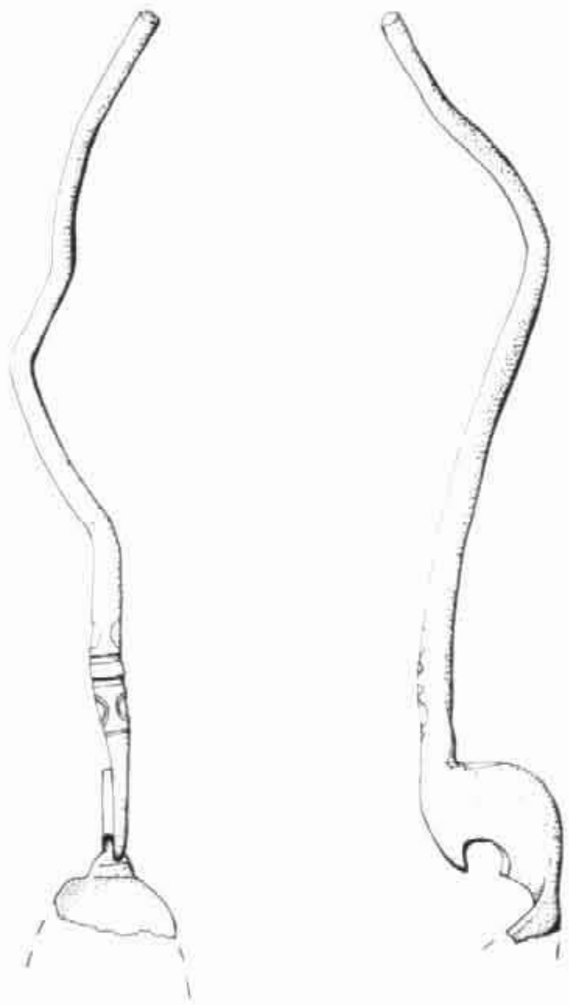
5



6

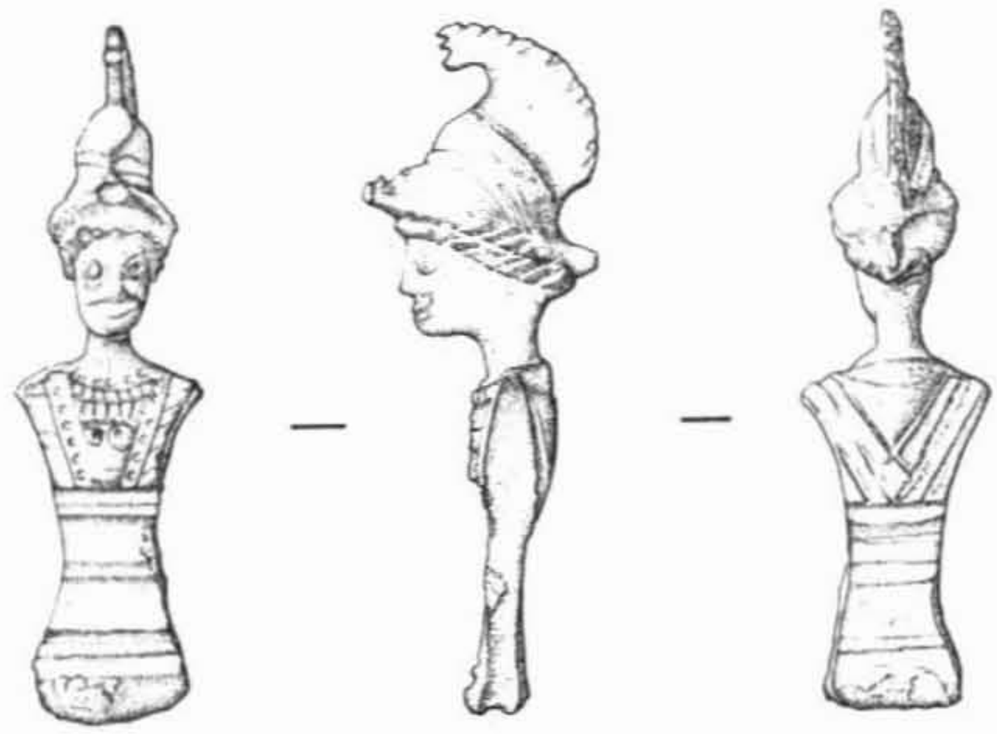


7

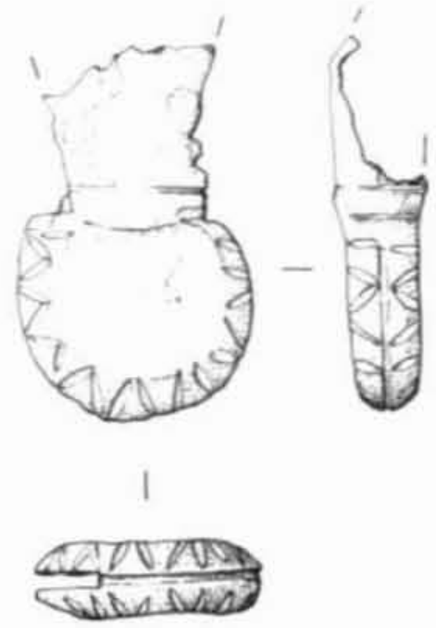


8

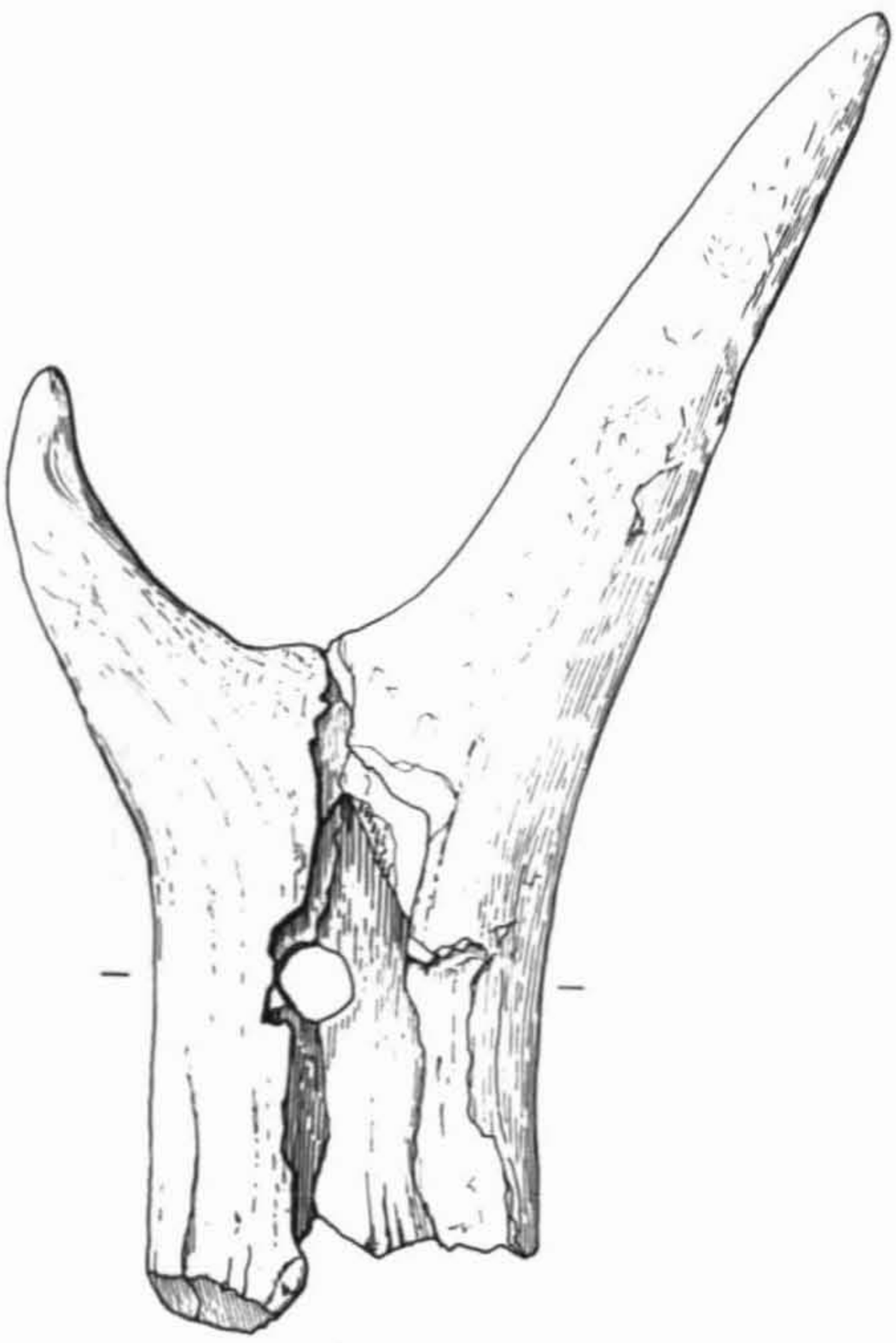
FIG 6.22



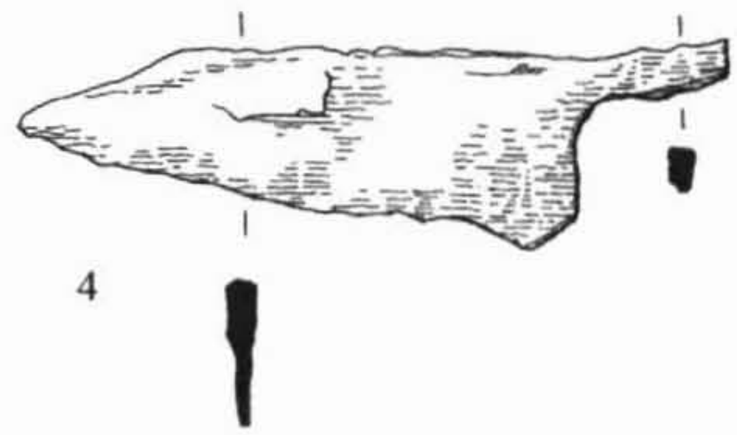
1



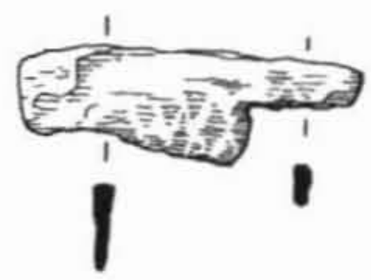
2



3



4



5

FIG 6.23.

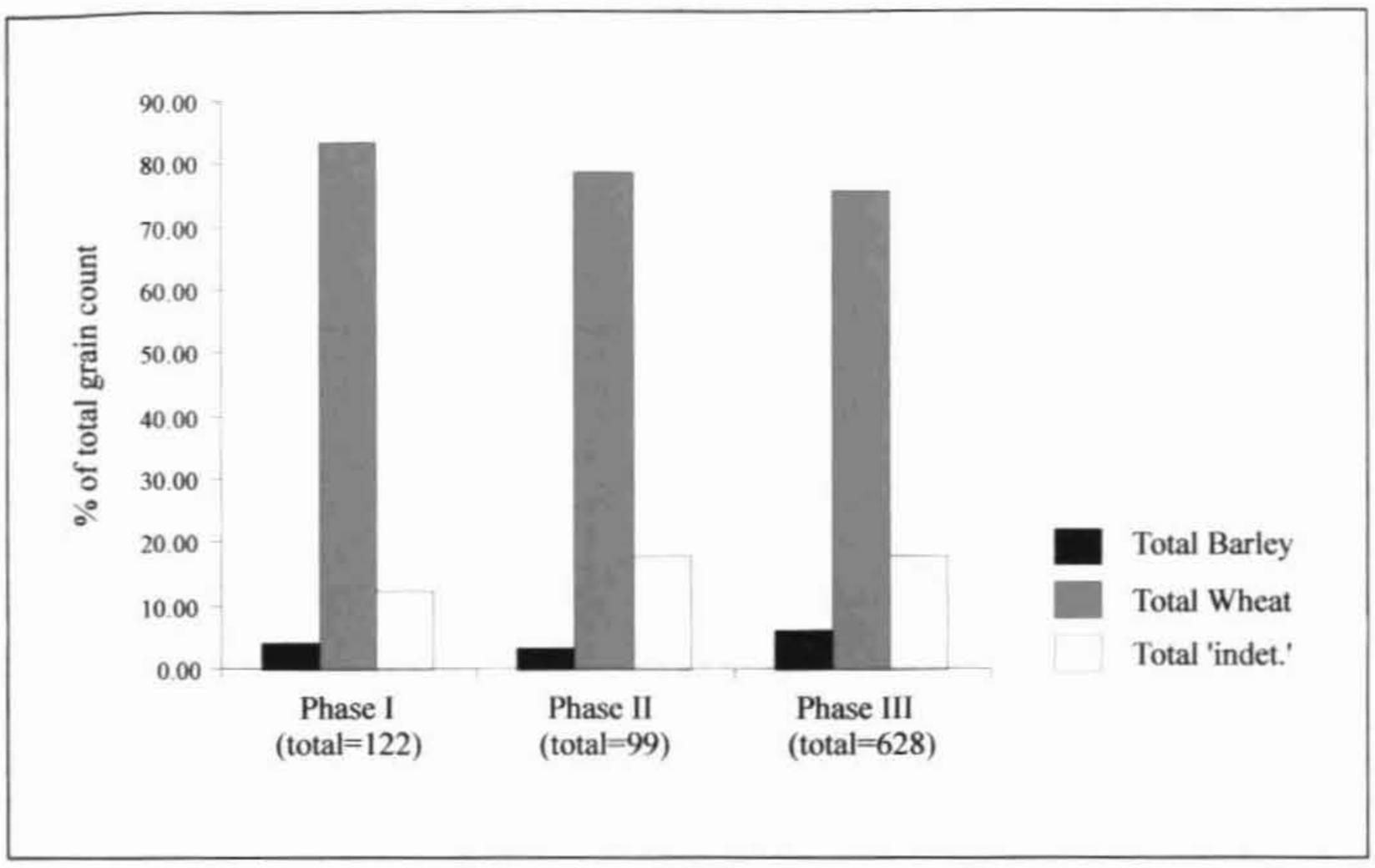

90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
% of total grain count
Phase I
(total=122)
Phase II
(total=99)
Phase III
(total=628)
Total Barley
Total Wheat
Total 'indet.'

FIG 7.1

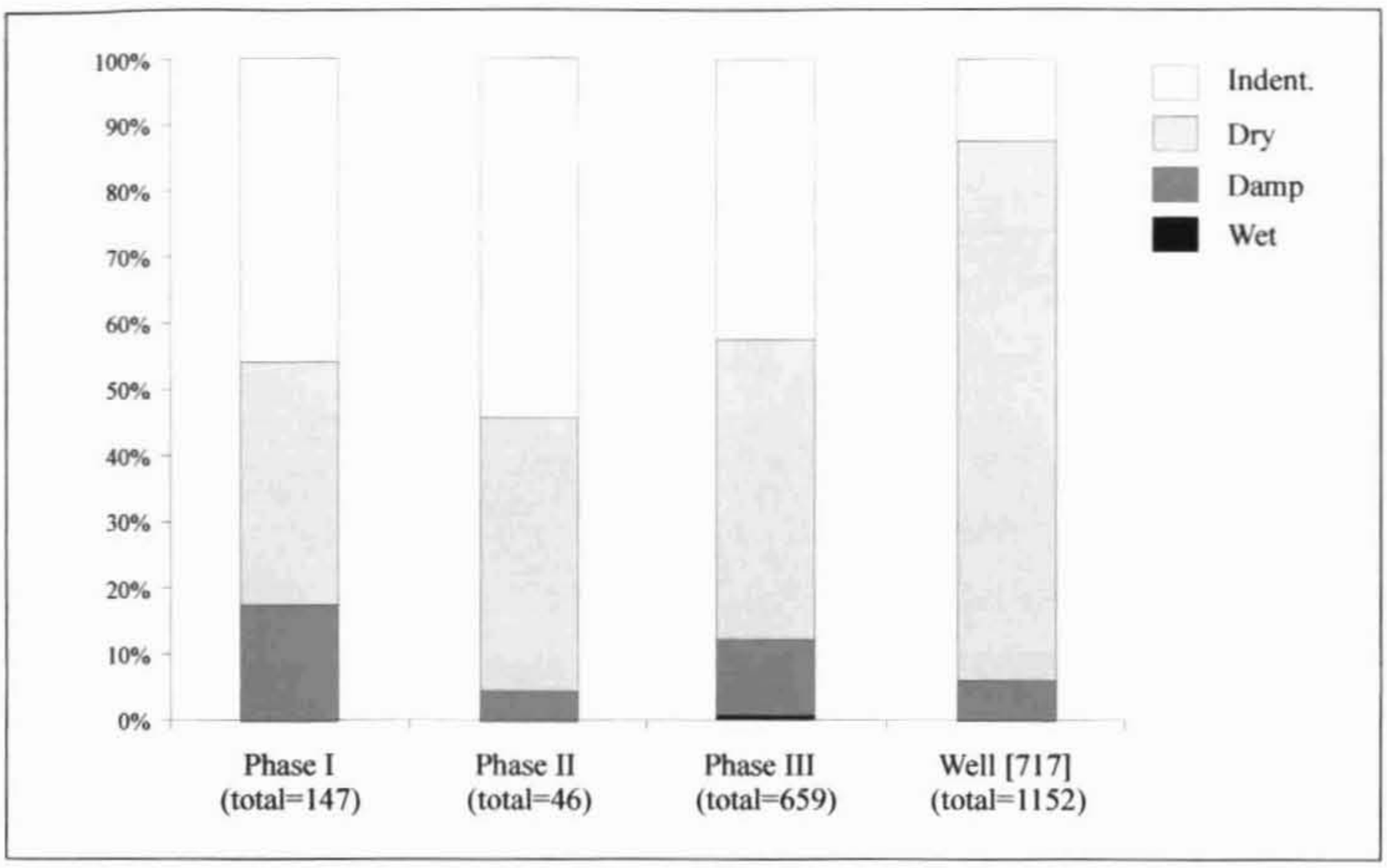

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Indent.
Dry
Damp
Wet
Phase I
(total=147)
Phase II
(total=46)
Phase III
(total=659)
Well [717]
(total=1152)

FIG 7.2.

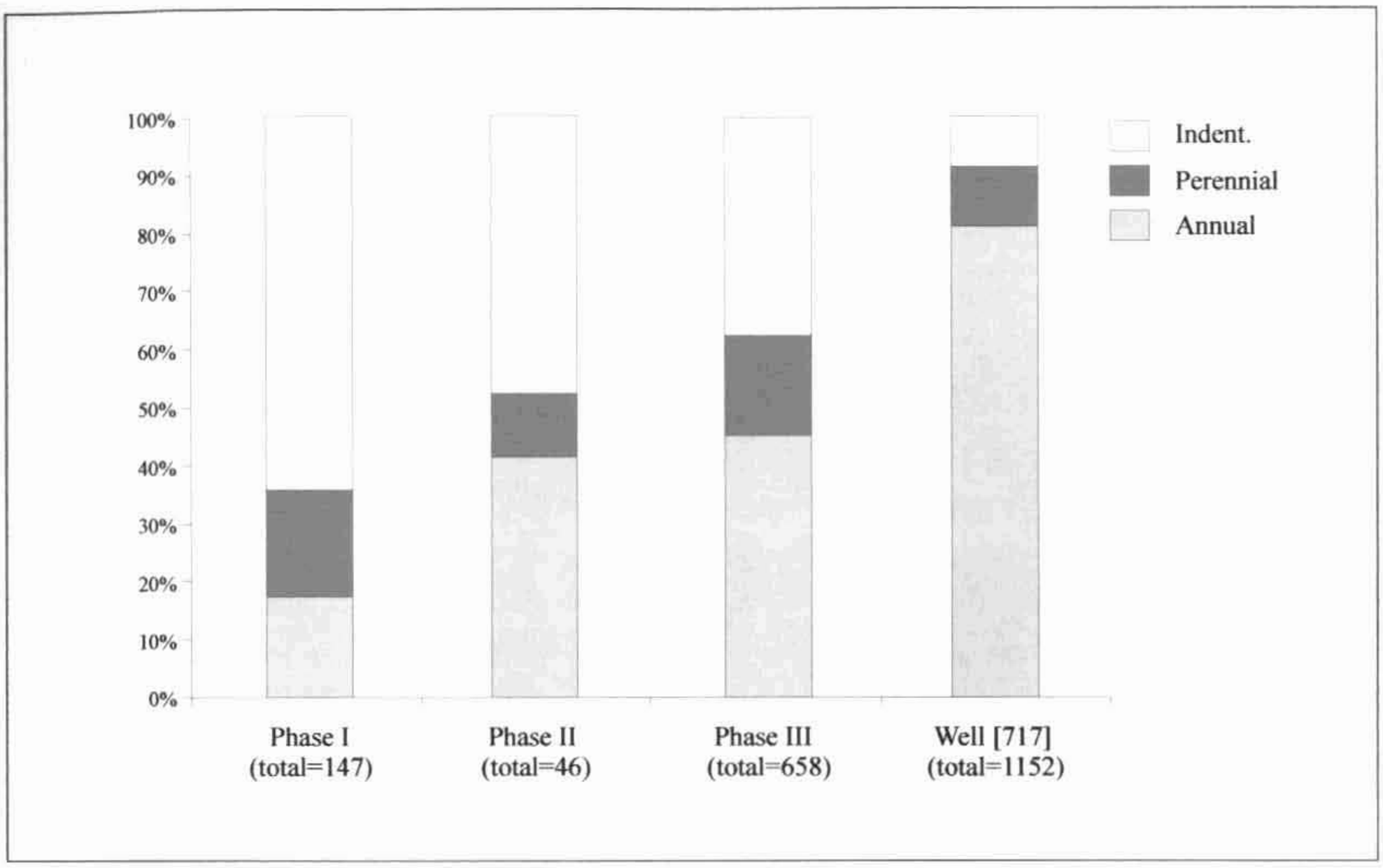

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Indent.
Perennial
Annual
Phase I
(total=147)
Phase II
(total=46)
Phase III
(total=658)
Well [717]
(total=1152)

FIG 7.3

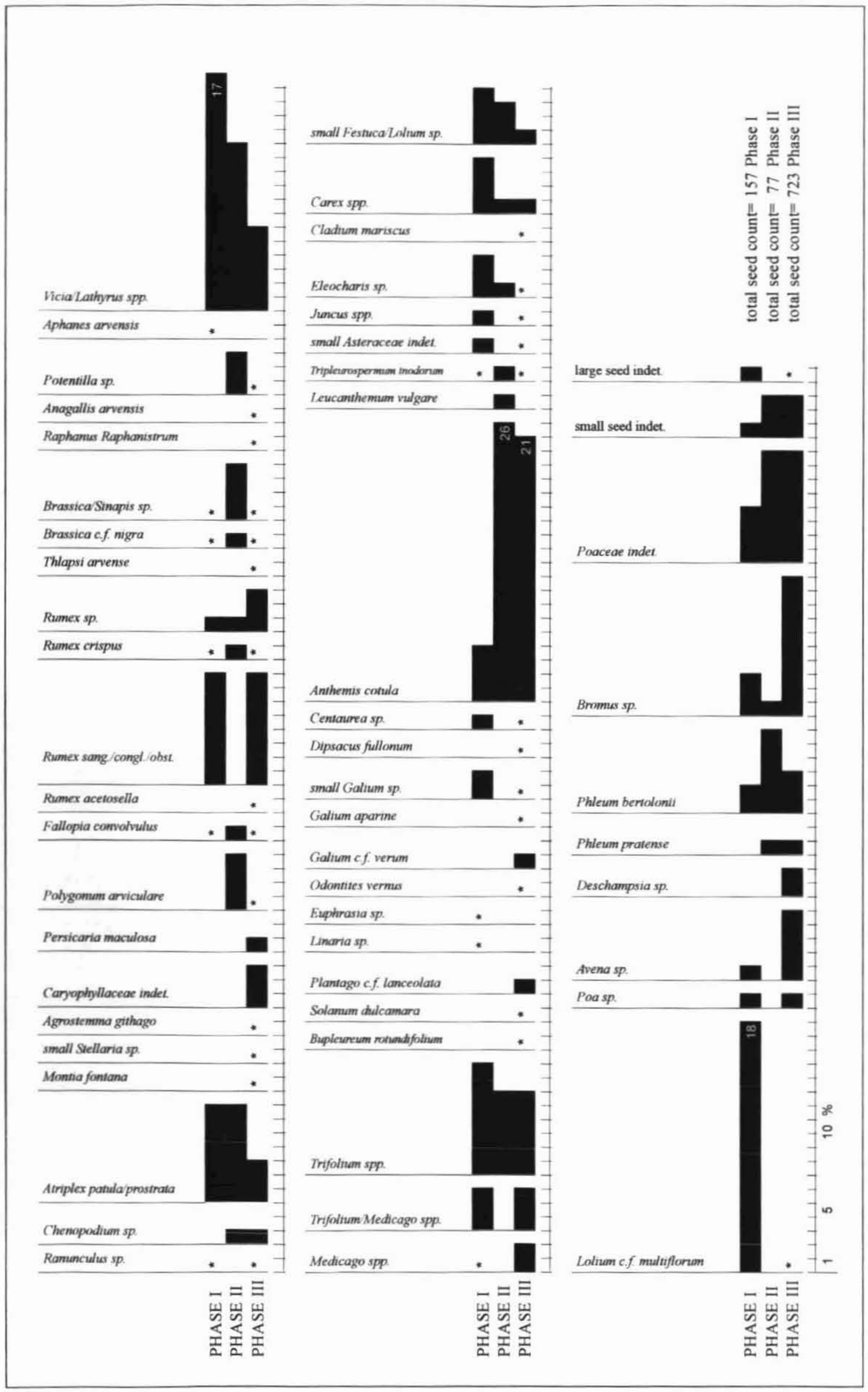

Vicia/Lathyrus spp.
Aphanes arvensis
Potentilla sp.
Anagallis arvensis
Raphanus Raphanistrum
Brassica/Sinapis sp.
Brassica c.f. nigra
Thlapsi arvense
Rumex sp.
Rumex crispus
Rumex sang./congl./obst.
Rumex acetosella
Fallopia convolvulus
Polygonum arviculare
Persicaria maculosa
Caryophyllaceae indet.
Agrostemma githago
small Stellaria sp.
Montia fontana
Atriplex patula/prostrata
Chenopodium sp.
Ranunculus sp.
PHASE I
PHASE II
PHASE III
17
small Festuca/Lolium sp.
Carex spp.
Cladium mariscus
Eleocharis sp.
Juncus spp.
small Asteraceae indet.
Tripleurospermum inodorum
Leucanthemum vulgare
26
21
Anthemis cotula
Centaurea sp.
Dipsacus fullonum
small Galium sp.
Galium aparine
Galium c.f. verum
Odontites vernus
Euphrasia sp.
Linaria sp.
Plantago c.f. lanceolata
Solanum dulcamara
Bupleureum rotundifolium
Trifolium spp.
Trifolium/Medicago spp.
Medicago spp.
PHASE I
PHASE II
PHASE III
total seed count= 157 Phase I
total seed count= 77 Phase II
total seed count= 723 Phase III
large seed indet.
small seed indet.
Poaceae indet.
Bromus sp.
Phleum bertolonii
Phleum pratense
Deschampsia sp.
Avena sp.
Poa sp.
18
Lolium c.f. multiflorum
1
5
10 %
PHASE I
PHASE II
PHASE III

FIG 7.4

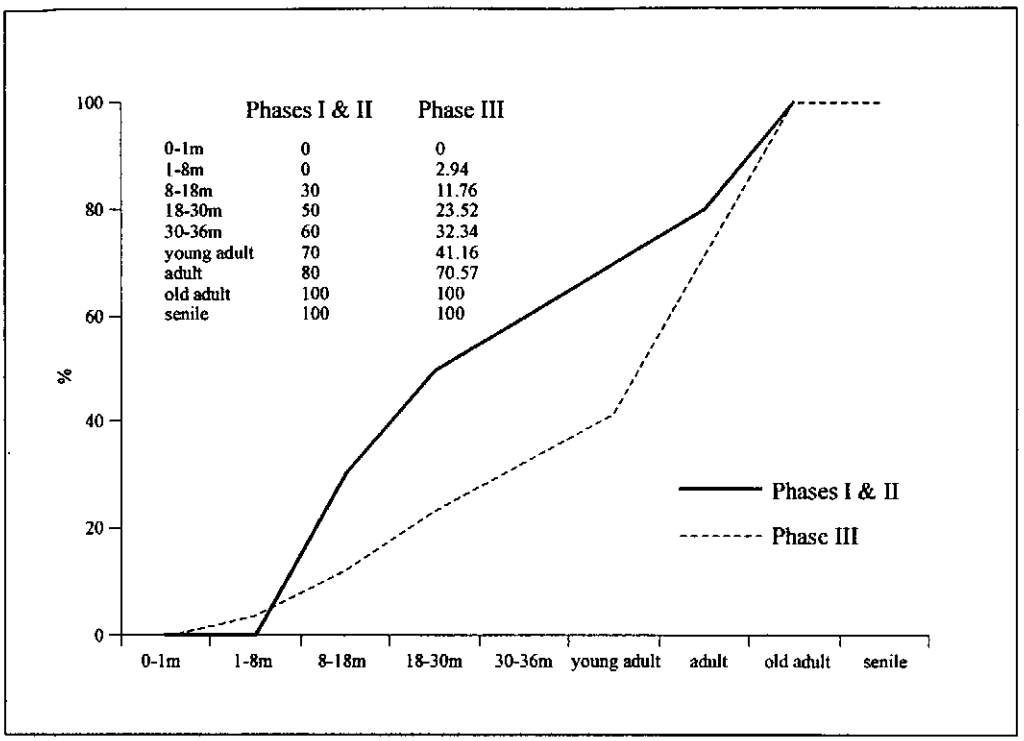

Phases I & II
Phase III
0-1m 0 0
1-8m 0 2.94
8-18m 30 11.76
18-30m 50 23.52
30-36m 60 32.34
young adult 70 41.16
adult 80 70.57
old adult 100 100
senile 100 100
%
100
80
60
40
20
0
0-1m
1-8m
8-18m
18-30m
30-36m
young adult
adult
old adult
senile
Phases I & II
Phase III

FIG 7.5

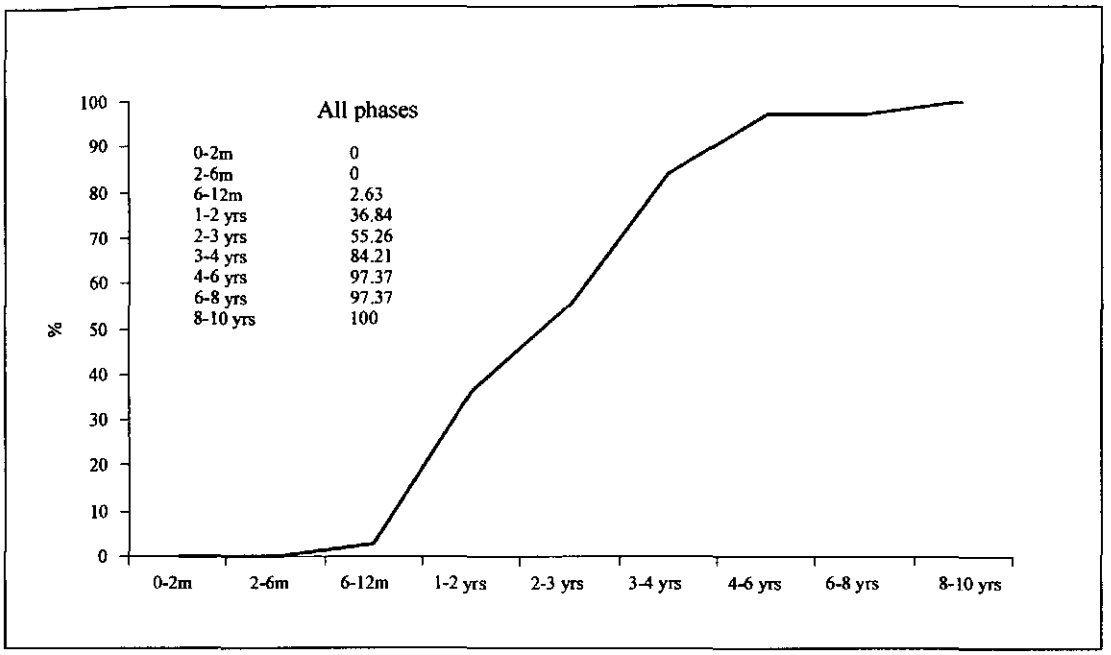
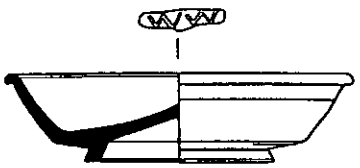
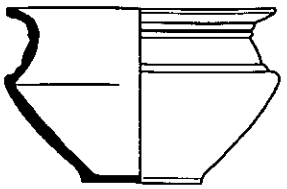

All phases
0-2m 0
2-6m 0
6-12m 2.63
1-2 yrs 36.84
2-3 yrs 55.26
3-4 yrs 84.21
4-6 yrs 97.37
6-8 yrs 97.37
8-10 yrs 100
%
100
90
80
70
60
50
40
30
20
10
0
0-2m
2-6m
6-12m
1-2 yrs
2-3 yrs
3-4 yrs
4-6 yrs
6-8 yrs
8-10 yrs

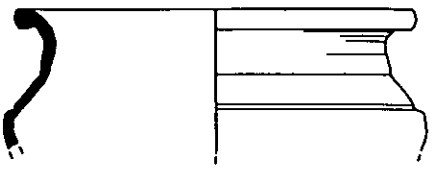
FIG 7.6.



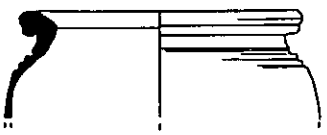
F4697 <3437>



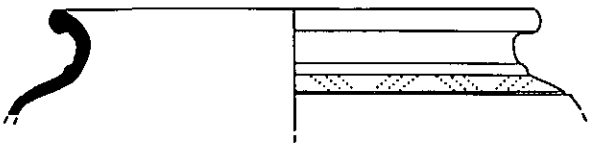
F5543 <3096>



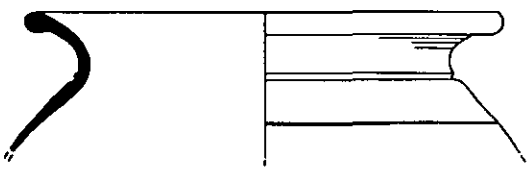
F5500 <3015>



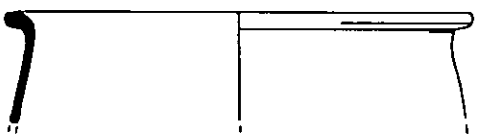
F556 <2596>



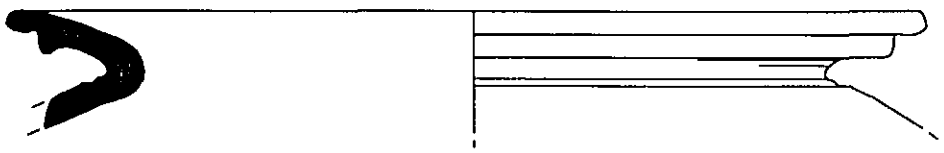
F5531 <3071>



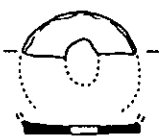
F5033 <8097/8



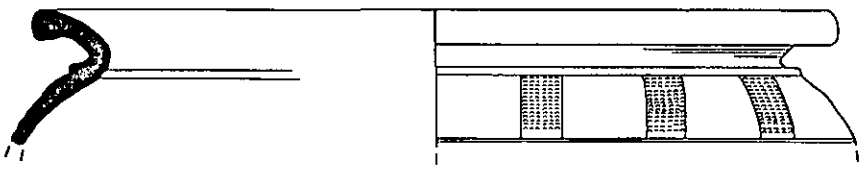
F4815 <3575>



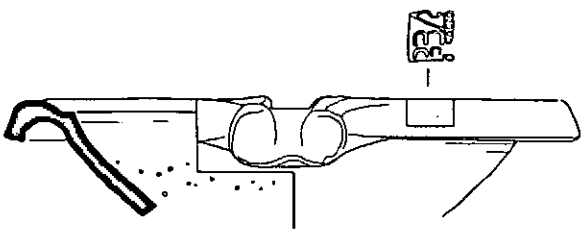
F5522 <3037>



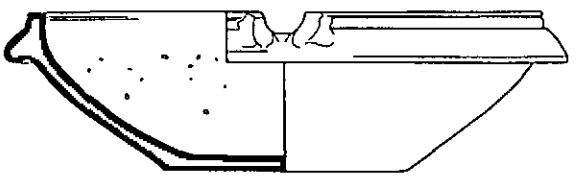
F5500 <3013>



F8163 <3512>

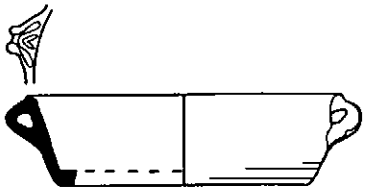


F5651 <3272>

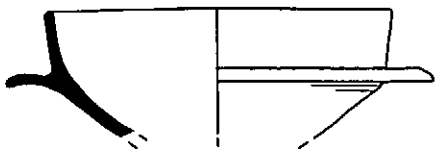


F1908 <3038>

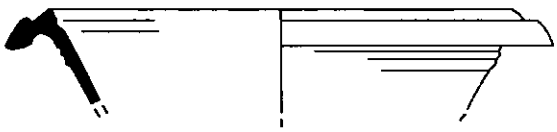
FIG. 7.7



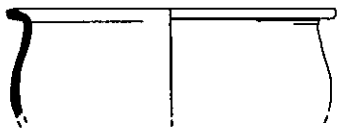
F5736 <3489>



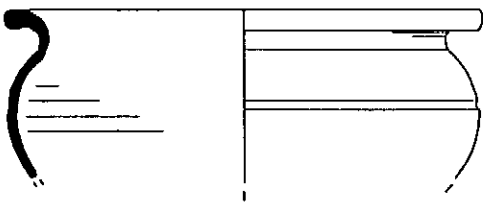
F5627 <3229>



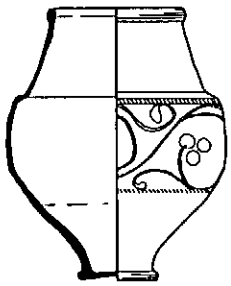
F5176/5679 <3267>



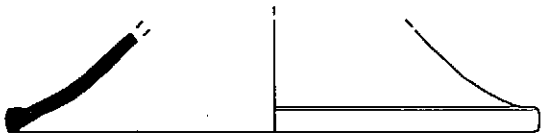
F5558 <3136>



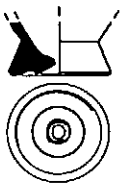
F5280 <2666>



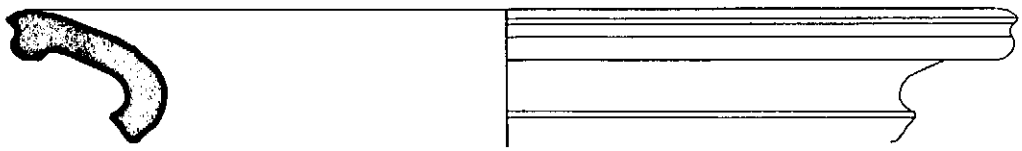
F1929 <3099>



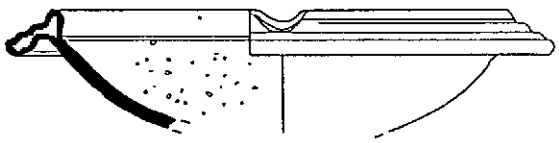
F5280 <2666>



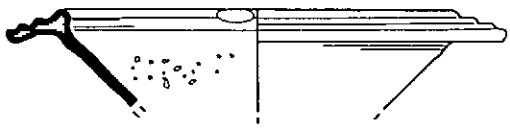
F5303 <2699>



F5309 <4331>

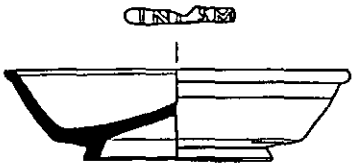


F5543 <2976>



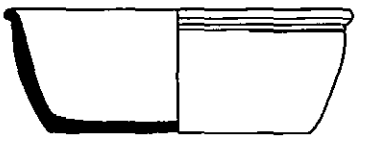
F5733 <3669>

FIG 7.8.



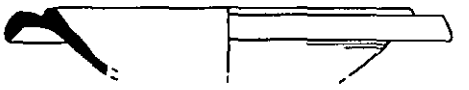
F5501 <3022>

F5427 <2890>

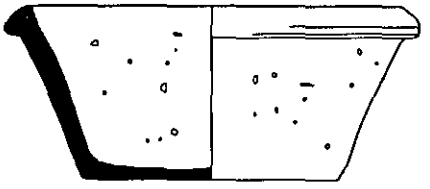


F5061 <3282>

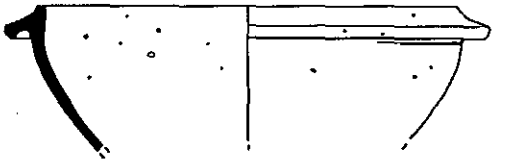
F5727 <3472>



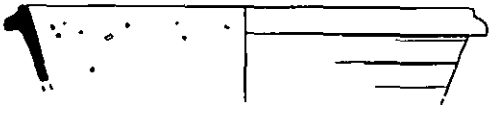
F8016 <3613>



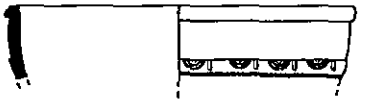
F5520 <3001>



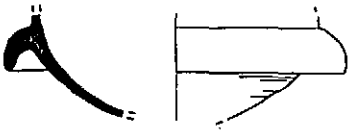
F5422 <2838>



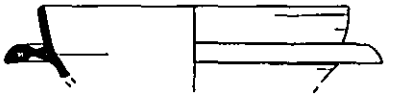
F5427 <2890>



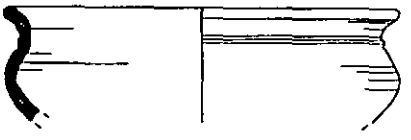
F5501 <3034>



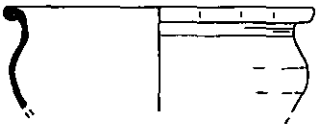
F5389 <2789>



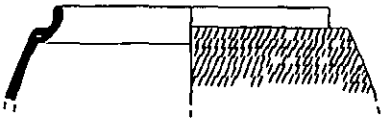
F5387 <2784>



F5389 <2789>



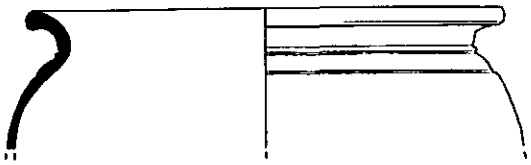
F4834 <3522>



F5417 <3115>

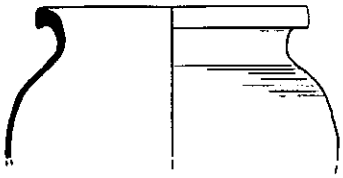
F5471 <3007>

FIG 7.9

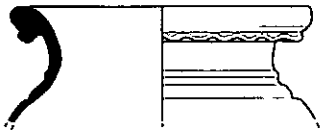


F5304 <2511>

F5447 <2923>

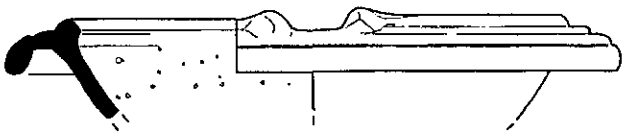


F5644 <3263>



F5705 <3442>

F5007 <2601>



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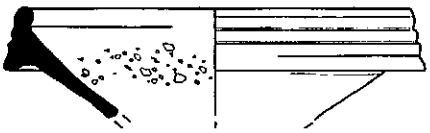

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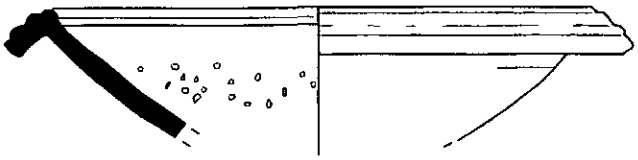

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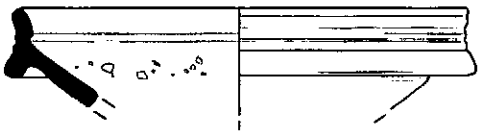

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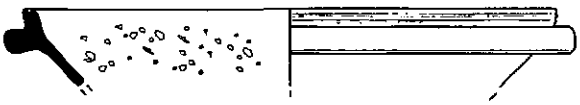

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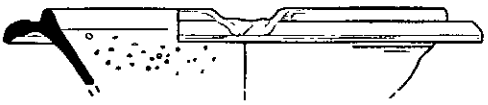

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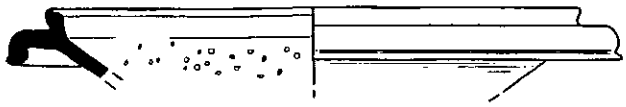

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FIG 7.10

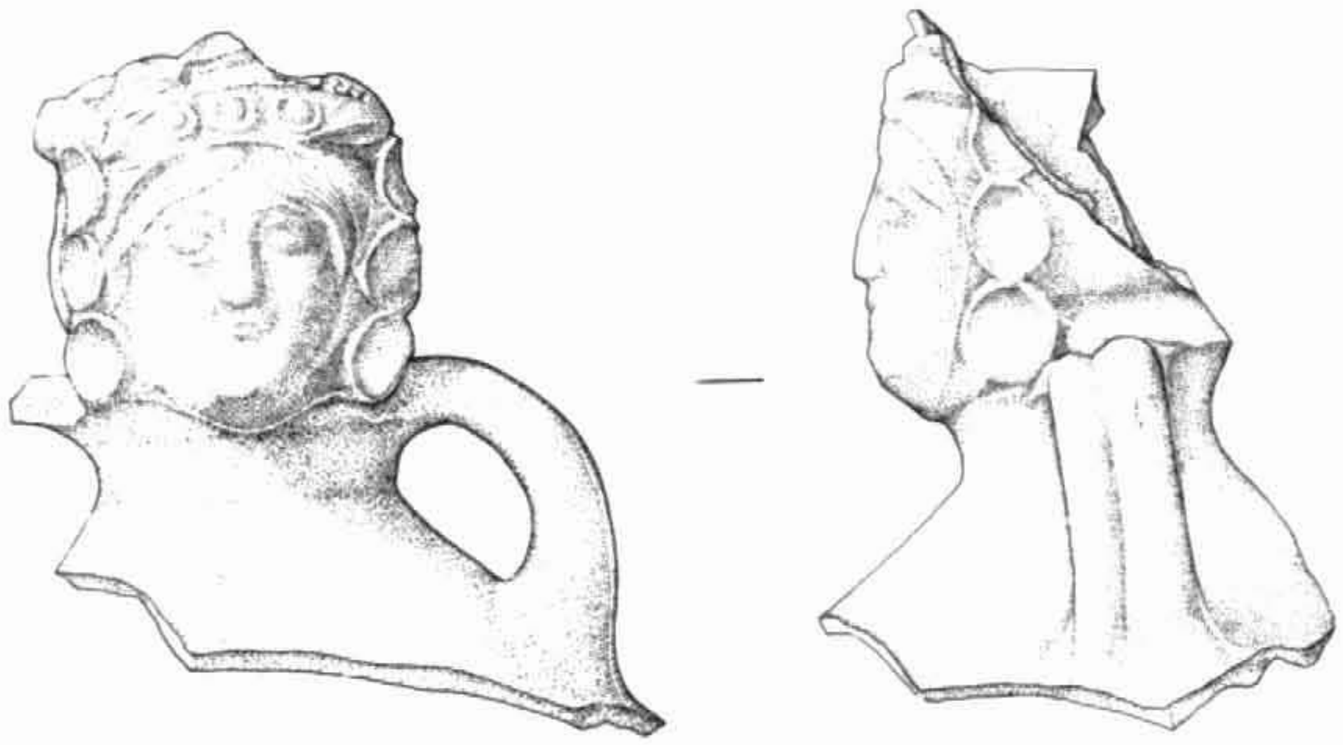


FIG 7.11

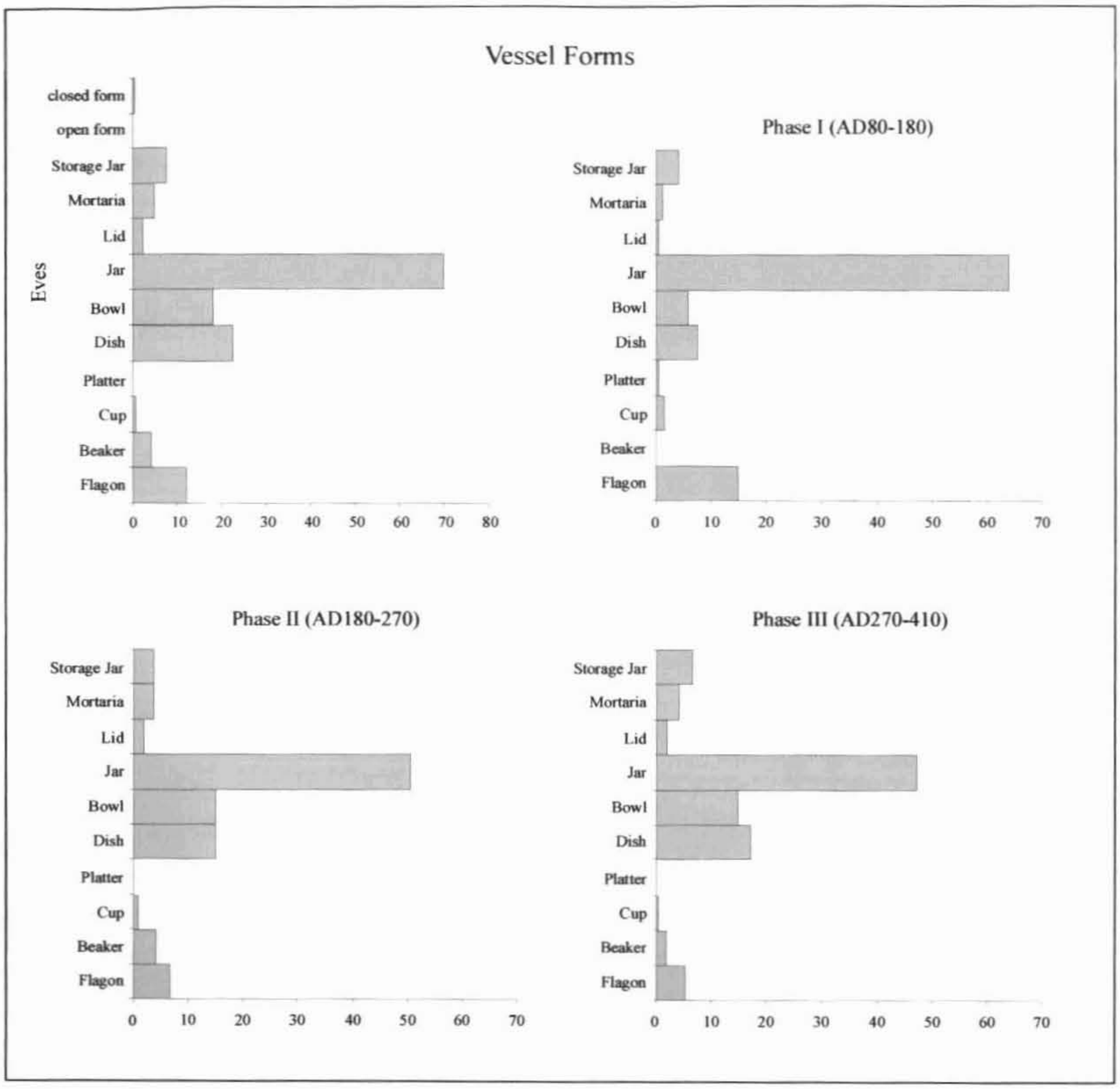
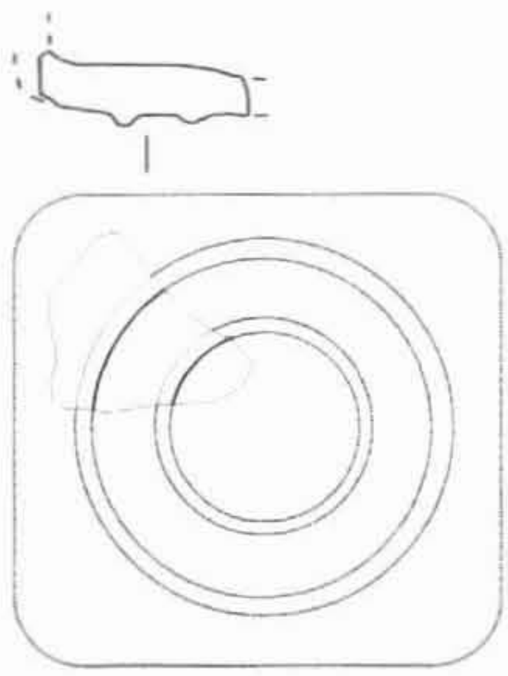

Vessel Forms
Eves
closed form
open form
Storage Jar
Mortaria
Lid
Jar
Bowl
Dish
Platter
Cup
Beaker
Flagon
0 10 20 30 40 50 60 70 80
Phase I (AD80-180)
0 10 20 30 40 50 60 70
Phase II (AD180-270)
0 10 20 30 40 50 60 70
Phase III (AD270-410)
0 10 20 30 40 50 60 70

FIG 7.12.



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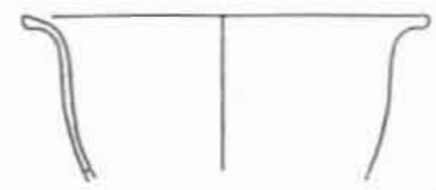

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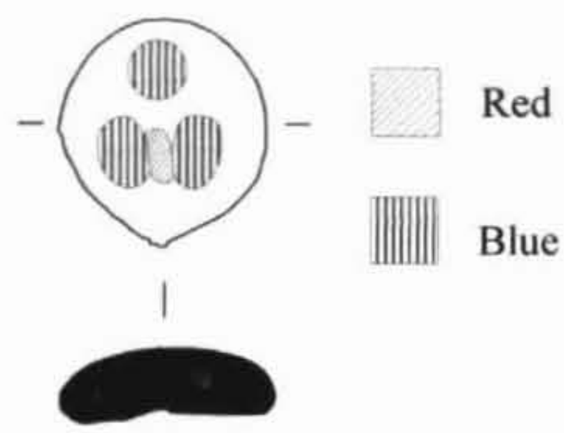

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FIG 7.13

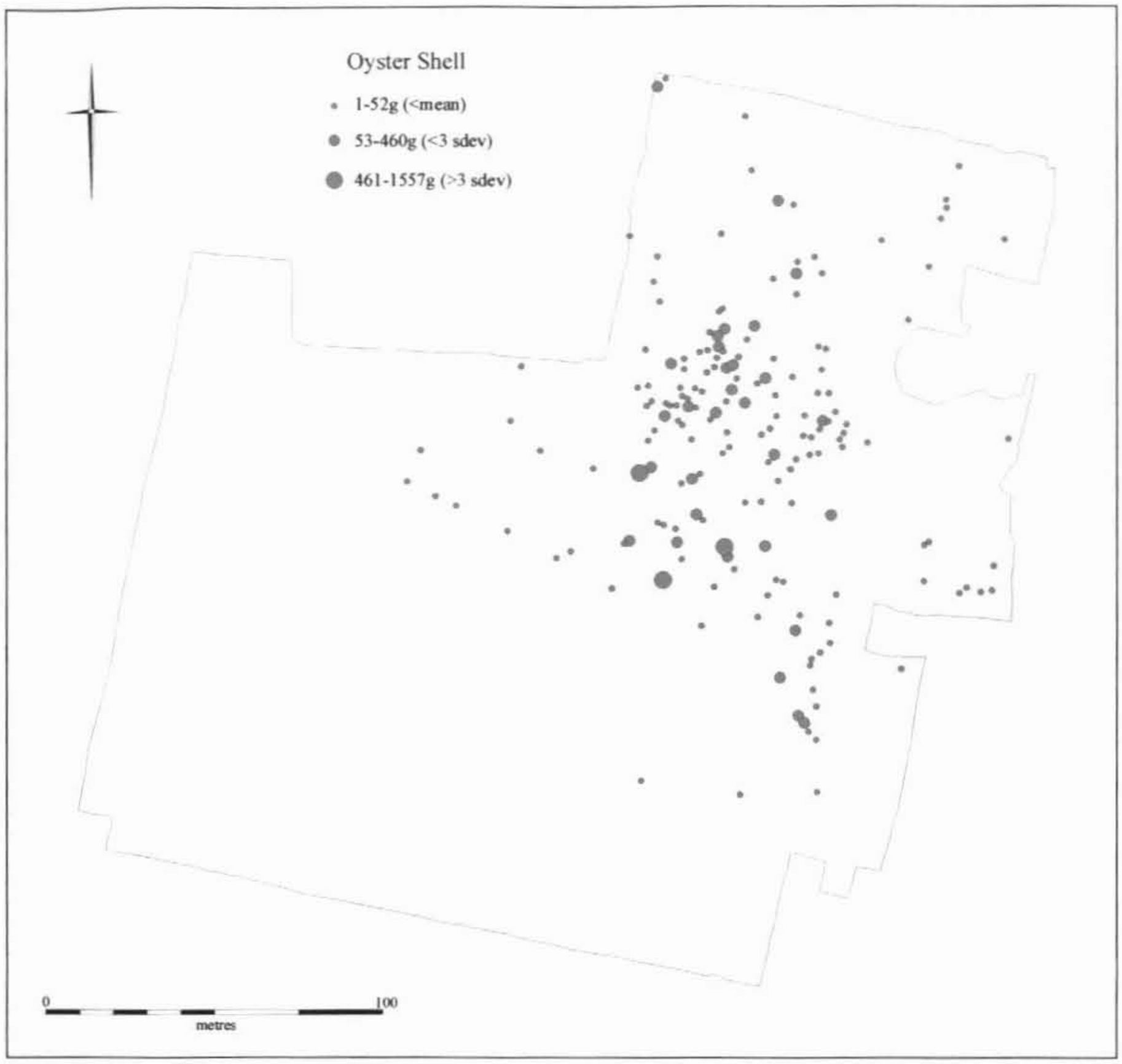

Oyster Shell
1-52g (<mean)
53-460g (<3 sdev)
461-1557g (>3 sdev)
0
100
metres

FIG 7.14

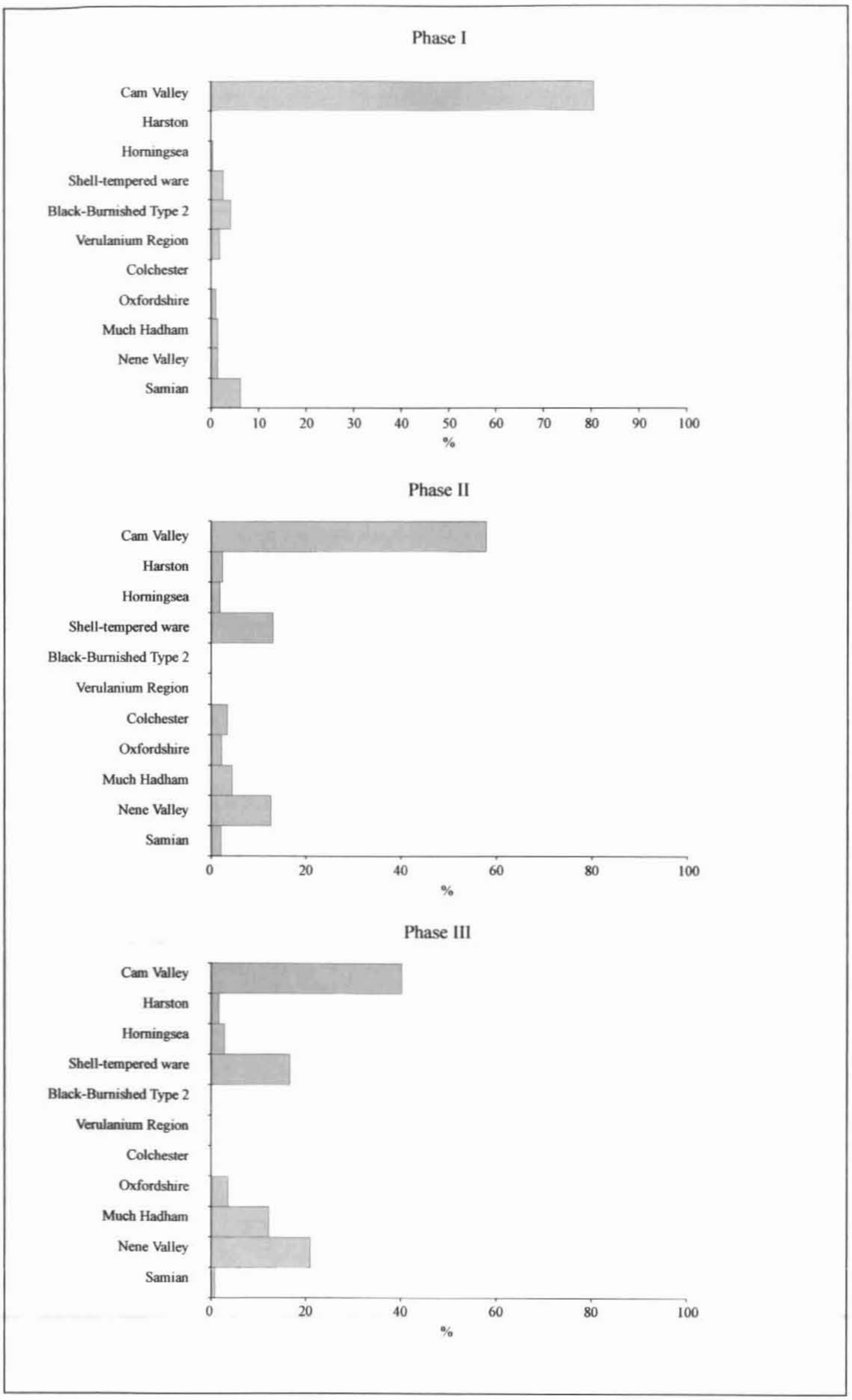

Phase I
Cam Valley
Harston
Horningsea
Shell-tempered ware
Black-Burnished Type 2
Verulanium Region
Colchester
Oxfordshire
Much Hadham
Nene Valley
Samian
0 10 20 30 40 50 60 70 80 90 100
%
Phase II
Cam Valley
Harston
Horningsea
Shell-tempered ware
Black-Burnished Type 2
Verulanium Region
Colchester
Oxfordshire
Much Hadham
Nene Valley
Samian
0 20 40 60 80 100
%
Phase III
Cam Valley
Harston
Horningsea
Shell-tempered ware
Black-Burnished Type 2
Verulanium Region
Colchester
Oxfordshire
Much Hadham
Nene Valley
Samian
0 20 40 60 80 100
%

FIG 7.15

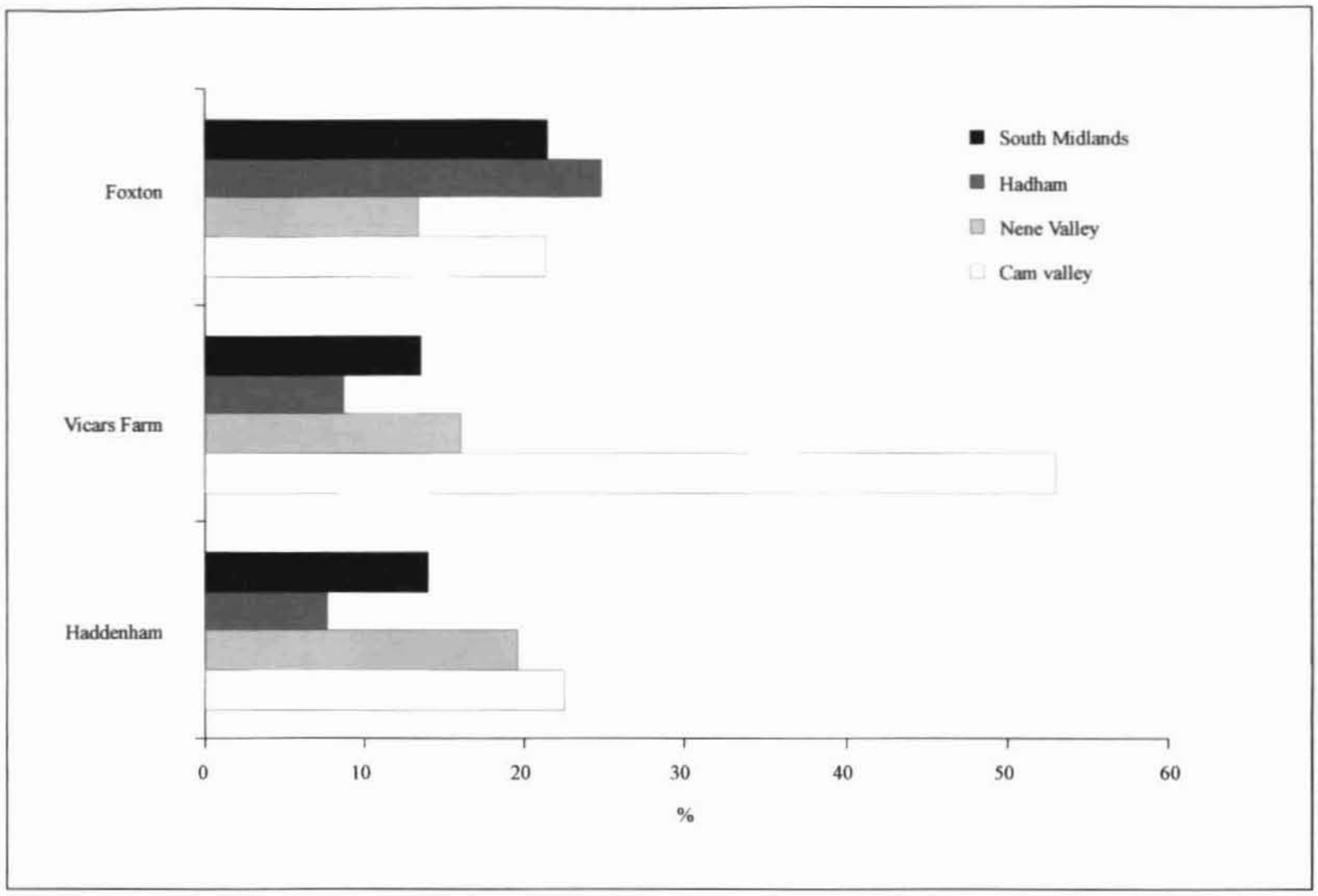

Foxton
Vicars Farm
Haddenham
South Midlands
Hadham
Nene Valley
Cam valley
0
10
20
30
40
50
60
%

FIG 7.16

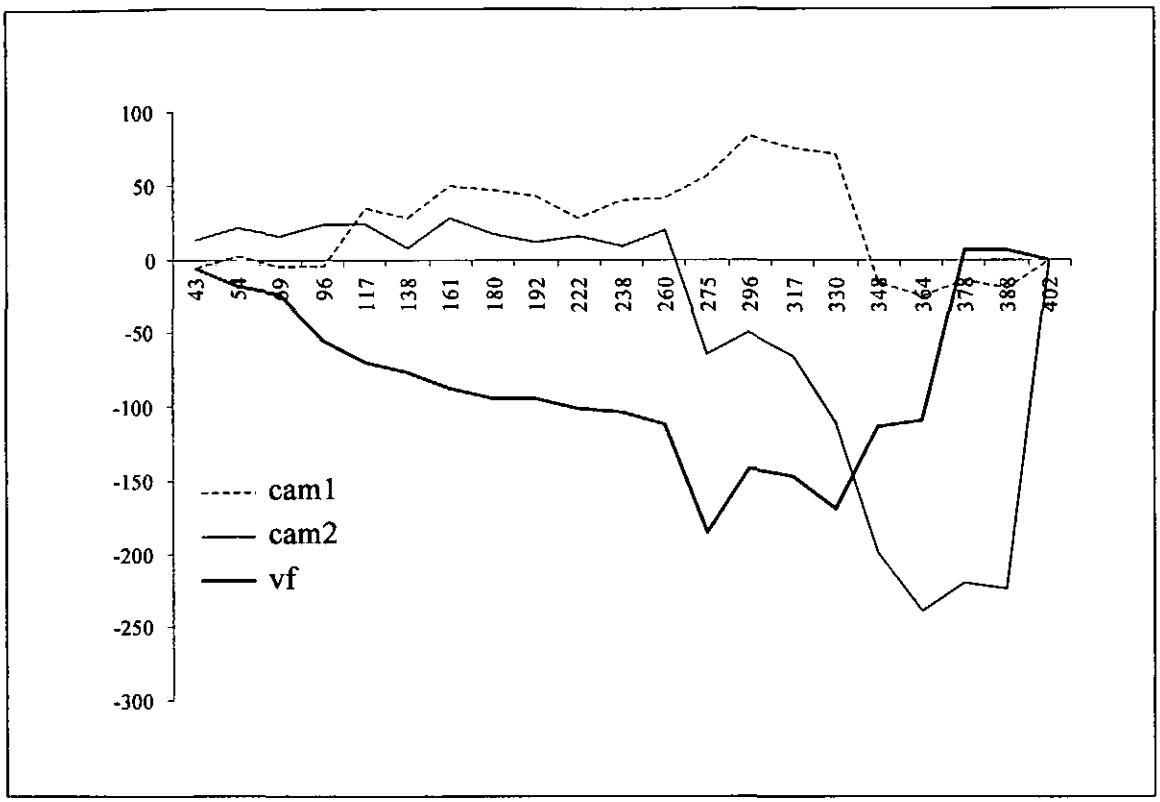

100
50
0
-50
-100
-150
-200
-250
-300
43
54
69
96
117
138
161
180
192
222
238
260
275
296
317
330
348
364
378
388
402
cam1
cam2
vf

FIG 7.17

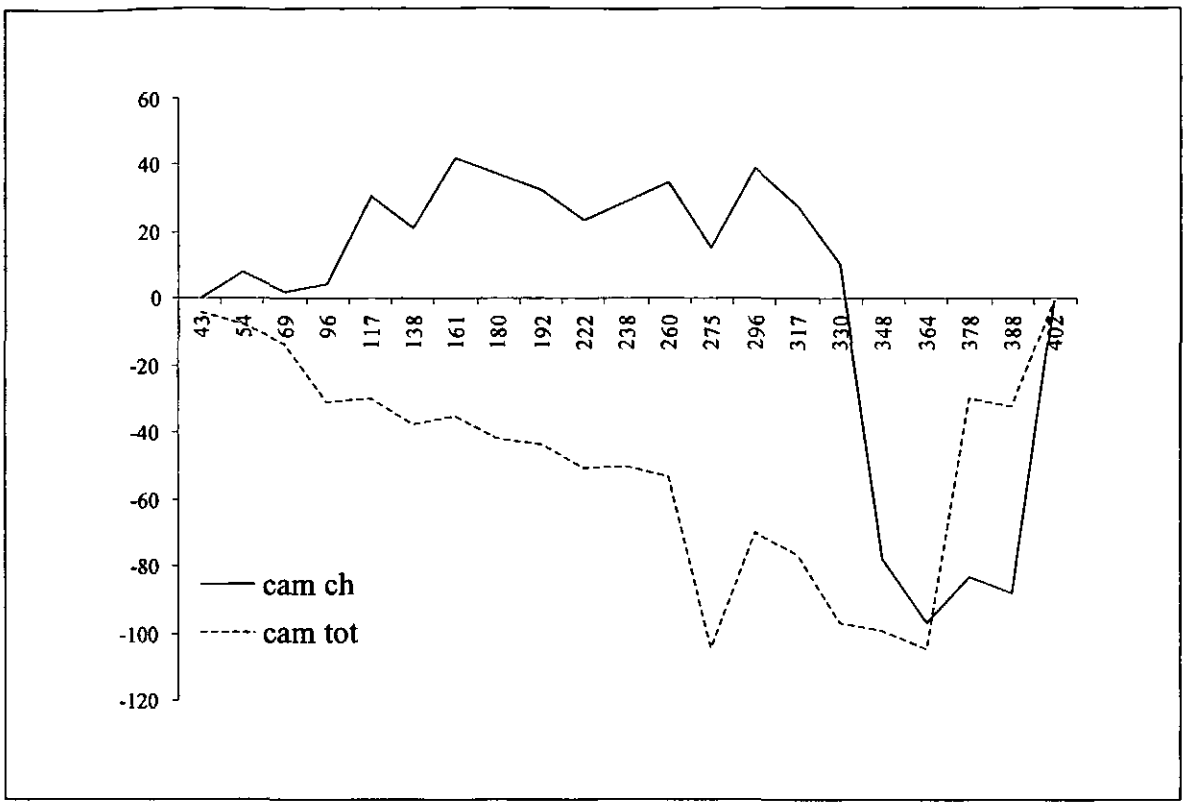
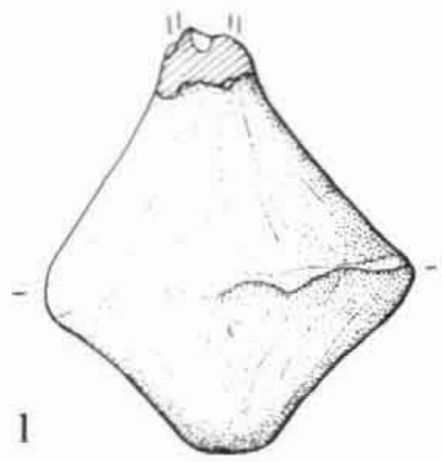

60
40
20
0
-20
-40
-60
-80
-100
-120
43
54
69
96
117
138
161
180
192
222
238
260
275
296
317
330
348
364
378
388
402
cam ch
cam tot

FIG 7·18



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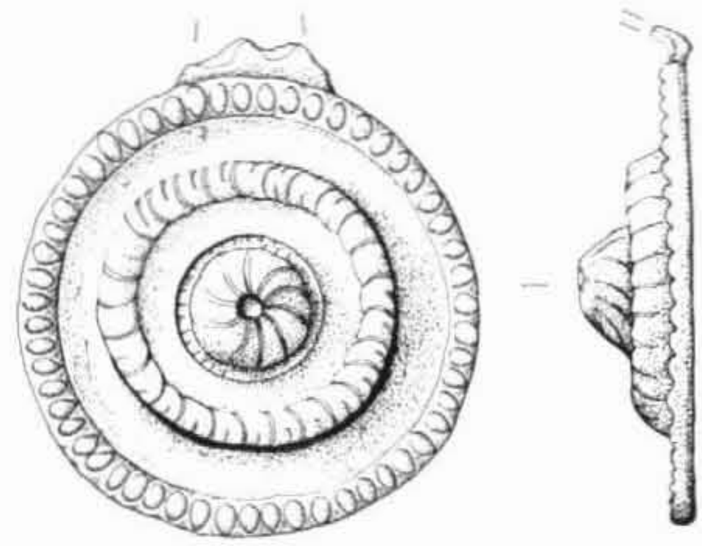

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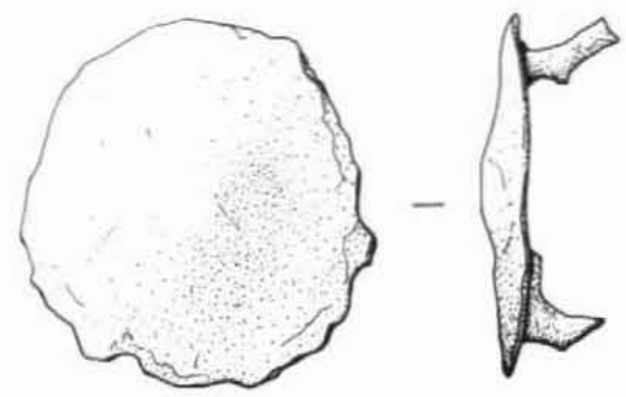

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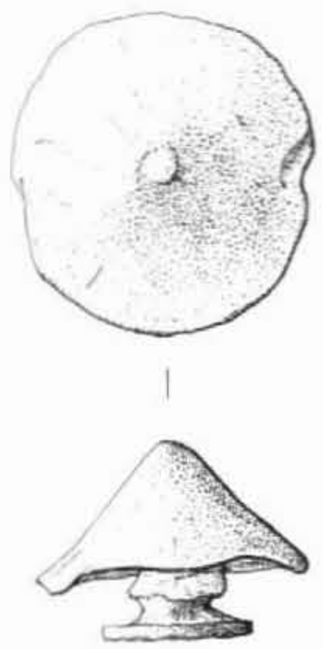

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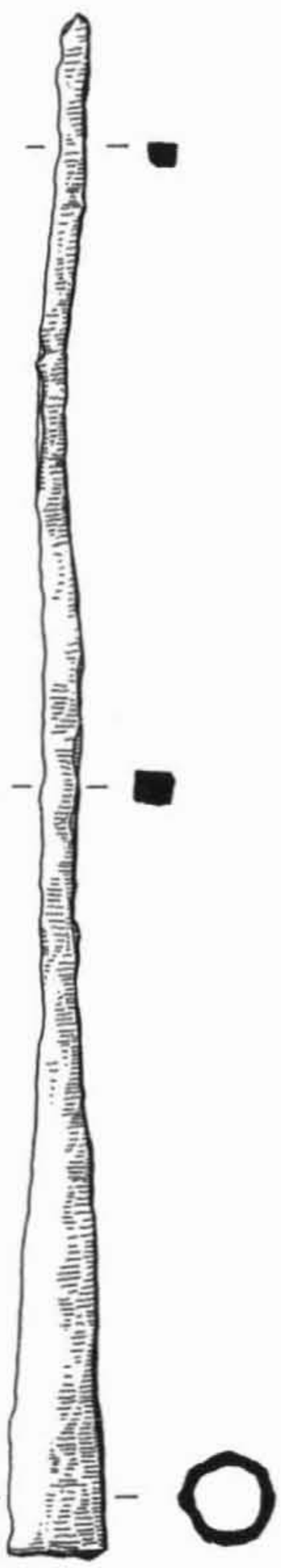

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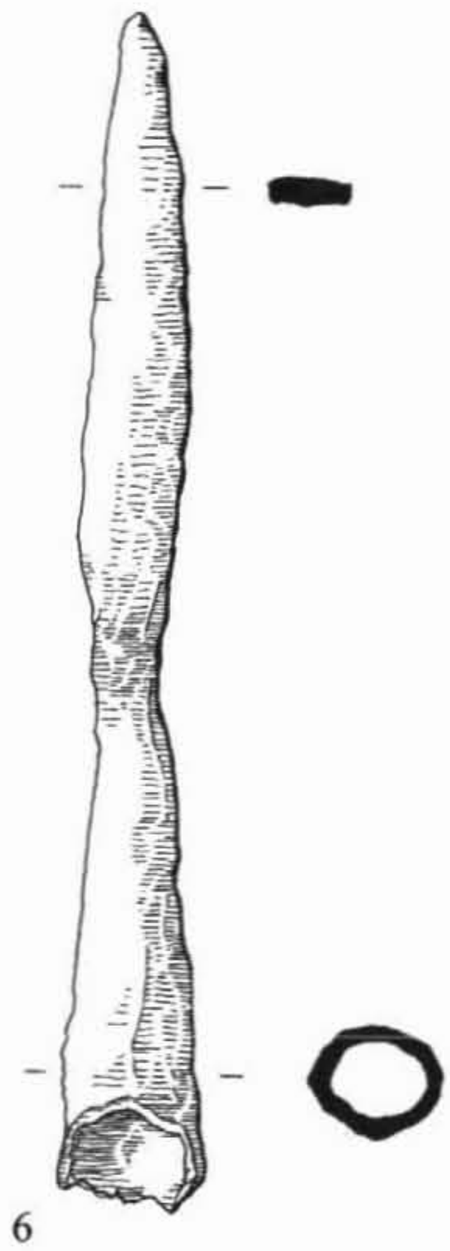

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FIG 7.19

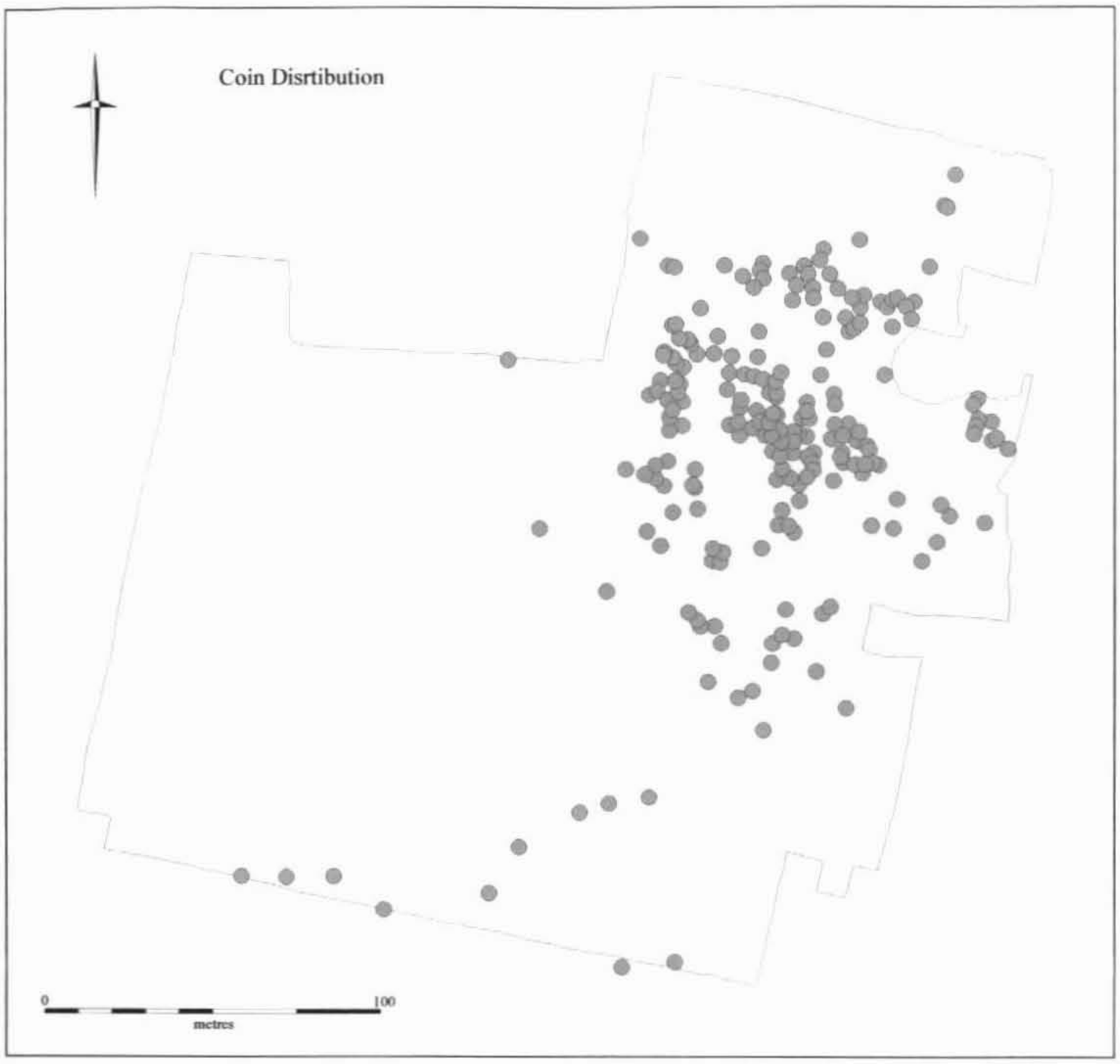

FIG 7.20

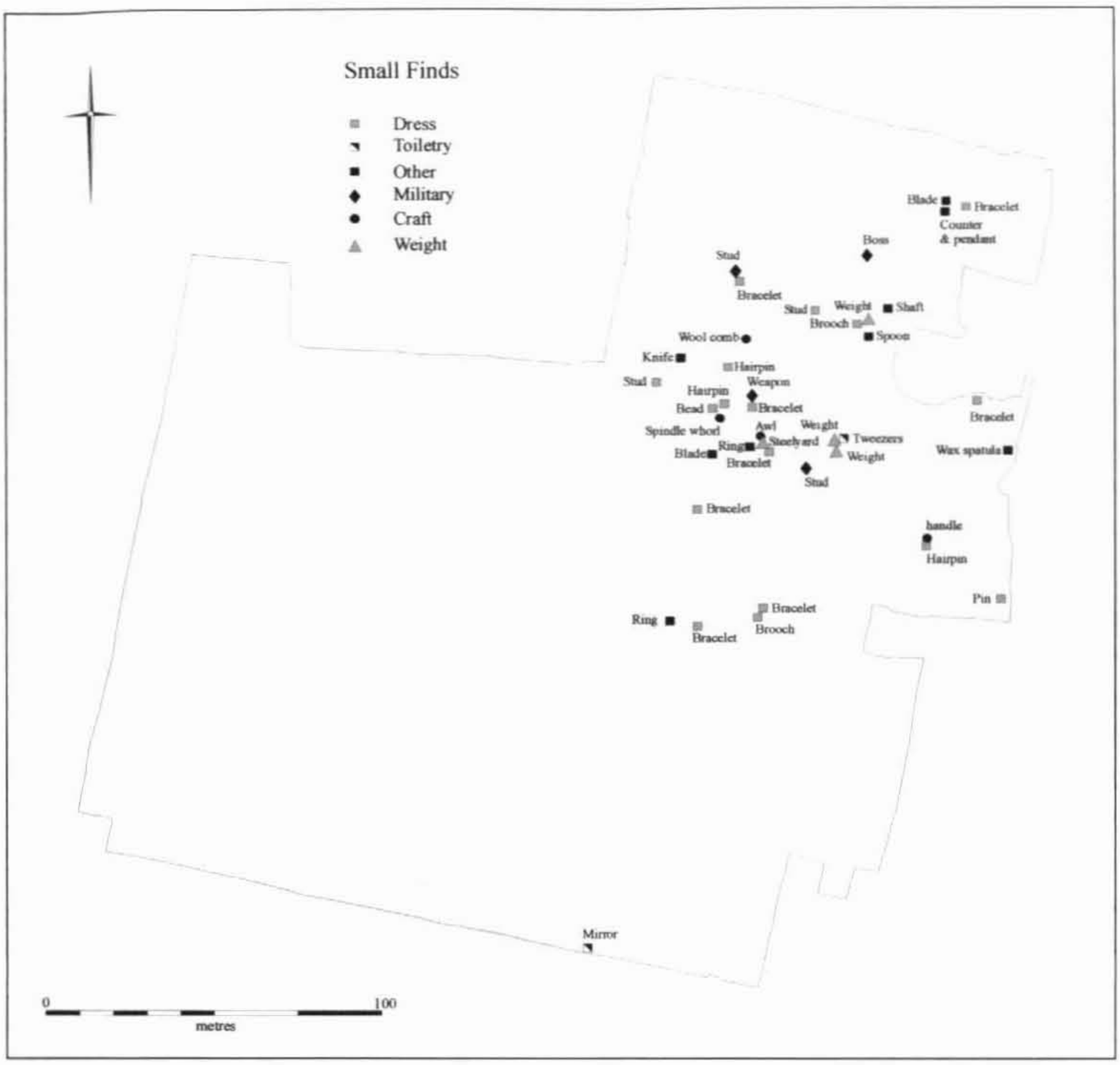
Small Finds
Dress
Toiletry
Other
Military
Craft
Weight
Blade
Bracelet
Counter & pendant
Boss
Stud
Bracelet
Stud
Weight
Shaft
Brooch
Spoon
Wool comb
Knife
Hairpin
Stud
Weapon
Hairpin
Bead
Bracelet
Bracelet
Spindle whorl
Awl
Weight
Steelyard
Tweezers
Ring
Blade
Bracelet
Weight
Wax spatula
Stud
Bracelet
handle
Hairpin
Pin
Bracelet
Ring
Brooch
Bracelet
Mirror
0
100
metres

FIG 7.21

Tables

Chapter 1

	Total	Average number of sherds per 10m square
Core (A)	54	2.16
Periphery (B)	5	0.2

Table 1.1. Comparison of Fieldwalking Squares A and B for Roman pottery

Category	No.	%
Tools:	***40***	***22.2***
Awl	1	0.6
Axe	1	0.6
Burin	1	0.6
Knife	3	1.7
Microlith	1	0.6
Scraper	12	6.7
Truncation	1	0.6
Retouched	19	10.6
Flaked piece	1	0.6
Tool spalls:	***1***	***0.6***
Burin spall	1	0.6
Debitage:	***140***	***77.8***
Blade	26	14.4
Flake	91	50.6
Core	15	8.3
Chunk	7	3.9
Total	**180**	**100**

Table 1.2. The flint assemblage

Feature	No. sherds	Weight (g)	Type
F1114	86	386	EIA
F1135	1	3	MIA
F1182	1	1	LBA/EIA
F1186	1	7	LBA/EIA
F1306	2	5	IA
F4147	10	77	LIA (1st century AD)
F4148	3	9	IA?
F4166	34	293	LIA (1st century AD)
F4228	9	119	MIA/LIA
F5003	1	3	LIA
F5009	1	7	LBA/EIA

Table 1.3. Summary of Iron Age pottery

Species	NISP
Cow	4
Sheep	1
Horse	4
Cow size	3
Sheep size	1
Un-id	10
Total	**23**

Table 1.4. Animal bone from Iron Age contexts

Species	NISP
Cow	40
Pig	2
Sheep	26
Horse	19
Dog	1
Duck sp	1
Cow size	13
Sheep size	60
Un-id	74
Total	**236**

Table 1.5. Summary of animal bone from Medieval and Post-medieval contexts

	No.	Weight (g)
Burnt clay	30	164
Brick/tile	152	4922
Pottery	261	2314
Glass	33	329
Clay pipe	5	22
Coal/clinker	53	205

Table 1.6. Summary of finds from medieval/post-medieval period

Chapter 2

	No. TP	Bone average per m² weight	count	average fragment weight	Pot average per m² weight	count	average sherd weight
alluvium	9	30.9	2.9	10.7	78.1	10.8	7.2
dark earth	11	365.8	15.3	23.9	257.4	23.1	11.1
buried soil	4	658.0	13.0	50.6	174.0	10.8	16.2

Table 2.1. Quantities of bone and pottery from the preserved soil profile in the basin F5033

Context	[1642]	[1646]	[4166]	[4188]	[4215]	[4334]	[4649]	[4668]
Feature	F.5470	F.5480	F.5621	F.5624	F.5626	F.5651	F.5704	F.5707
central/northern zone	N	N	N	N	N	C	C	C
Ranunuculus acris/bulbosus/repens		+	+	+		++	+++	++
Ranunculus scleratus L.							+++	
Ranunculus subgen. *BATRACHIUM* (DC.) A. Gray					++			
Urtica dioica L.	+++	++		+++	+++	+	+++	+
Urtica urens L.							+	
Corylus avellana L.					+			
Chenopodium c.f. *rubrum* L.							++	
Chenopodium *sp.*			+					
Atriplex patula/prostrata						++		++
Moehringia trinervia L.					+			
Stellaria media (L.) Vill.	++	+		+		+		
Persicaria hydropiper (L.) Spach				+				
Polygonum arviculare L.					+		+	
Rumex obstutifolius L.				++				
Bryonia dioica Jacq.		+						
Salix bracts and fruit valves				+				
Rorripa nasturtium-aquaticum *(L.) Hayek*				++				
Coronopus squamatus *(Forssk.) Asch*								+
Rubus subgen. *RUBUS*	+			+	+			
Potentilla reptans *L.*			+			++	+++	+
Potentilla sp.	+							
c.f. *Cornus sanguinea* L.					+			
Conium maculatum *L.*	++	++		+			+	
Apium nodiflorum (L.) Lag.		++		+++				
Stachys sylvatica/palustris	++	++	+		+			
Lamium album/purpureum	+	+	+			+	+	
Glechoma hederacea L.	+	+		+				
Sambucus nigra L.	+++			++	+++	++	+	+
Carduus nutans L.				+				
Carduus/Cirsium sp.	++							
Sonchus asper *(L.) Hill*				+				
Lemna sp.				++				+
Juncus sp.	+		++	++				
Eleocharis palustris *(L.) Roem & Schult.*			+					
Carex sylvatica *Huds.*			+++					
large trilete *Carex* sp.			+					
Poa sp.			+					
wood and bark fragments	++			+++	+++			
Moss				+				
Ostrocods				++				
Daphne eggs						+++	+++	+++

KEY:

'+' <10 items (1) '++' 10-50 items (3) '+++' >50 items (5)
To convert to a percentage, each symbol has been quantified as the number in brackets, then expressed as a proportion of the total count for an ecological group within each context. Where a taxon fits two categories it has been counted in both.

Table 2.2 Summary of main waterlogged taxa at Vicar's Farm

Table 2.3 Summary of charred non-cereal taxa from all contexts

Exceptionally rich context [717] F. 5280 was excluded from these calculations

SITE PHASE				I	I	I-II & II	I-II & II	II-III & III	II-III & III
no. of samples				7		12		28	
no. of 'rich' samples (more than 20 seeds)				2		2		9	
total sample volume/ litres				53		86		254.25	
		ecology	type		%		%		%
Ranunculus sp.	buttercups	dry	indet	1	0.64	0	0.00	3	0.41
Total *Chenopodium* sp.	goosefoots	dry	A	0	0.00	1	1.30	9	1.24
Atriplex patula L./*prostrata* Boucher ex DC.	common/spear-leaved orache	dry	A	12	7.64	6	7.79	21	2.90
Montia fontana ssp. *chondrosperma* L.	blinks	damp	indet.	0	0.00	0	0.00	1	0.14
small *Stellaria* sp. (<2mm)	small seeded stichwort	indet.	indet	0	0.00	0	0.00	1	0.14
Agrostemma githago L.	corncockle	dry	A	0	0.00	0	0.00	1	0.14
medium Caryophyllaceae indet. (1-3mm)	medium seeded Pink Family type	indet.	indet	0	0.00	0	0.00	3	0.41
Persicaria maculosa Gray.	redshank	dry	A	0	0.00	0	0.00	1	0.14
Polygonum aviculare L.	knotgrass	dry	A	0	0.00	3	3.90	2	0.28
Fallopia convolvulus (L.) A. Love	black bindweed	dry	A	1	0.64	1	1.30	3	0.41
Rumex acetosella L.	sheep's sorrel	dry	P	0	0.00	0	0.00	5	0.69
Rumex sanguineus L./*conglomeratus* Murray/*obtusifolius* L.	wood/clustered/broad-leaved dock	damp	P	10	6.37	0	0.00	43	5.95
Rumex crispus L.	curled dock	damp	P	1	0.64	1	1.30	2	0.28
Rumex sp.	docks	indet.	indet	2	1.27	1	1.30	22	3.04
Thlaspi arvense L.	field penny-cress	dry	A	0	0.00	0	0.00	1	0.14
Brassica c.f. *nigra* (L.) W.D.J. Koch	black mustard	dry	A	1	0.64	1	1.30	1	0.14
Brassica/Sinapis sp. (c. 2mm)	cabbage/mustard type (wild or cultv.)	indet.	indet	1	0.64	3	3.90	2	0.28
c.f. *Raphanus raphanistrum* L. seed	wild radish	dry	A	0	0.00	0	0.00	1	0.14
Anagallis arvensis L.	scarlet pimpernel	dry	A	0	0.00	0	0.00	1	0.14
Potentilla sp.	cinquefoil	indet.	indet	0	0.00	2	2.60	1	0.14
Aphanes arvensis L.	parsley-piert	dry	A	1	0.64	0	0.00	0	0.00
Vicia c.f. *cracca* L.	tufted vetch	dry	P	0	0.00	0	0.00	2	0.28
Lathyrus nissolia L.	grass vetchling	dry	A	0	0.00	1	1.30	0	0.00
large *Vicia/Lathyrus/Pisum* sp. (>4mm)	vetch/wild pea/garden pea	indet.	indet	8	5.10	0	0.00	9	1.24
medium *Vicia/Lathyrus* sp. (2-4mm)	vetch/wild pea	indet.	indet	12	7.64	4	5.19	10	1.38
small *Vicia/Lathyrus* sp. (<2mm)	vetch/wild pea	indet.	indet	7	4.46	4	5.19	24	3.32
Medicago spp.	medicks	indet.	indet.	1	0.64	0	0.00	12	1.66
Trifolium/Medicago spp. (c.2-3mm)	clovers/medicks	indet.	indet.	4	2.55	0	0.00	22	3.04
total *Trifolium* spp.	clovers	indet.	indet.	13	8.28	5	6.49	42	5.81
c.f. *Bupleurum rotundifolium* L.	thorow-wax	dry	A	0	0.00	0	0.00	1	0.14
small Apiaceae indet. kernel	small seeded Carrot Family type	indet.	indet	0	0.00	0	0.00	1	0.14
Solanum dulcamara L.	bittersweet	damp	P	0	0.00	0	0.00	1	0.14
Plantago c.f. *lanceolata* L.	ribwort plantain	dry	P	0	0.00	0	0.00	5	0.69
Linaria sp.	toadflax	dry	indet.	1	0.64	0	0.00	0	0.00
Euphrasia sp.	eyebright	indet.	A	1	0.64	0	0.00	0	0.00
Odontites vernus (Bellardi) Dumort.	red bartsia	dry	A	0	0.00	0	0.00	2	0.28
Galium c.f. *verum* L.	lady's bedstraw	dry	P	0	0.00	0	0.00	5	0.69
Galium aparine L.	cleavers	dry	A	0	0.00	0	0.00	3	0.41
small *Galium* sp. (<2mm)	small-seeded goosegrass	indet.	indet.	3	1.91	0	0.00	3	0.41
Dipsacus fullonum L.	teasel	damp	B	0	0.00	0	0.00	1	0.14
Centaurea sp.	knapweeds	dry	indet.	1	0.64	0	0.00	2	0.28
Anthemis cotula L.	stinking chamomile	dry	A	6	3.82	20	25.97	150	20.75
Leucanthemum vulgare Lam.	ox-eye daisy	dry	P	0	0.00	1	1.30	0	0.00
Tripleurospermum inodorum (L.) Sch. Blp.	scentless mayweed	dry	A	1	0.64	1	1.30	1	0.14
small Asteraceae indet. (<2mm)	small seeded Daisy Family type	indet.	indet.	1	0.64	0	0.00	3	0.41
Juncus spp.	rushes	damp	indet.	1	0.64	0	0.00	1	0.14
total *Eleocharis* sp.	all spike-rush types	damp	P	5	3.18	1	1.30	1	0.14
Cladium mariscus (L.) Pohl	great fen sedge	wet	P	0	0.00	0	0.00	4	0.55
Carex spp.	true sedges	damp	P	7	4.46	1	1.30	10	1.38
small Festuca/Lolium sp. (< 3mm)	fescue/rye-grass	indet.	indet.	7	4.46	2	2.60	11	1.52
Lolium c.f. *multiflorum* Lam.	Italian rye-grass	dry	A/B	28	17.83	0	0.00	3	0.41
Poa spp.	meadow-grass	indet.	indet.	1	0.64	0	0.00	10	1.38
Avena sp.	wild/cultv. oats	indet.	A	2	1.27	0	0.00	38	5.26
Deschampsia sp.	hair-grass	damp	P	0	0.00	0	0.00	16	2.21
Phleum pratense L.	timothy	dry	P	0	0.00	1	1.30	10	1.38
Phleum bertolonii DC.	lesser cat's-tail	dry	P	3	1.91	5	6.49	24	3.32
Bromus sp.	brome grass	dry	A	5	3.18	1	1.30	71	9.82
Poaceae indet.	Grass Family types	indet.	indet.	7	4.46	6	7.79	56	7.75
small seed indet. (<3mm)		indet.	indet.	1	0.64	2	2.60	22	3.04
large seed indet. (>3mm)		indet.	indet.	1	0.64	0	0.00	2	0.28
TOTAL COUNT				157	100.00	77	100.00	723	100.00

sample number	135	211	37	90	116	150	206			167	172	182	171	153
context	[1739]	[4334]	[550]	[1181]	[1620]	[1909]	[4215]			[4060]	[1939]	[1890]	[1761]	[1928]
feature	F.5500	F.5651	F.5287	F.5385	F.5474	F.1908	F.5629			F.5178	F.5322	F.5522	F.5533	F.5543
description	pit nr, struct	pit nr, struct	ditch base	ditch	basal well	pit nr, shrine	pit(seq. ditch)			driveway	gully	shrine ditch	shrine ditch	ditch
period	I	I	I	I	I	I	I			I-II	I-II	I-II	I-II	I-II
area	A	A	A	B	B	A	E			E	A	A	A	A
group	Nisted bdng	Nisted bdng	1ry W div	ext encl	ext encl	shrine	aleg B	TOTALS FOR PHASE I	% OF TOTAL GRAIN	NWSE	shrine	shrine	shrine	main encl
sample volume/ litres	6	2	12	12	12	10	0.5			8	8	1	1	14
fraction examined	1	0.25	1	1	1	1	1			1	1	1	1	1
TOTAL BARLEY RACHIS INTERNODES	0	0	0	0	2	5				0	0	0	0	0
TOTAL BARLEY GRAIN	1	0	0	0	0	4	0	5	4.10	0	2	0	0	0
ALL *T. s/d* GRAIN TYPES	6	0	5	0	16	74	0			1	24	1	0	1
ALL *T. s/d* GLUME BASE TYPES	54	0	26	0	303	454	0			12	94	16	34	8
TOTAL WHEAT GRAIN	6	0	6	0	16	74	0	102	83.61	1	24	1	0	1
TOTAL 'Indet.' GRAIN	0	0	0	0	5	10	0	15	12.30	0	0	0	0	1
TOTAL GRAINS	7	0	6	0	21	89	0	122		1	26	1	0	2
TOTAL CHAFF ITEMS	52	0	25	0	317	457	0	851		12	69	16	32	8
TOTAL SEEDS	37	0	2	0	8	110	0	157		1	27	2	2	2
Triticum s/d. GLUME BASE : GRAIN	9.00		5.20		18.94	8.14				12.00	3.92	16.00		8.00
TOTAL CHARRED ITEMS	96	0	33	0	346	655	0	1130		14	142	18	34	12
COUNT DENSITY per litre	16.00	0.00	2.75	0.00	28.83	65.50	0.00			2.33	17.75	18.00	34.00	0.86
CATEGORY ASSIGNED	chaff-rich	empty	chaff-rich	empty	chaff-rich	chaff-rich	empty			empty	chaff-rich	chaff-rich	chaff-rich	empty
X= used for calc.of assemblage composition	x				x	x			3		x			
X= used ro examine weed flora types & ecology	x					x			2		x			

sample number	123	<179>	44	45	198	202	50	99			237	90	106	114
context	[1642]	[3041]	[717]	[719]	[4132]	[4188]	[1027]	[1454]			[4668]	[1374]	[1478]	[1579]
feature	F.5470	F.5483	F.5280	F.5280	F.5015	F.5624	F.5369	F.5436			F.5707	F.5427	F.5427	F.5501
description	E-W ditch	gully	wkd well	lower well	ditch	ditch	ditch	lower well			pond post	E-W ditch	E-W ditch	late ditch
period	I-II	II	II	II	II	II	II	II			II-III	II-III	II-III	III
area	A	A	A	A	E	E	D	D			A	B	B	A
group	main encl	shrine	western	western	aleg B	aleg B	S. boundary	encl. G13	TOTALS FOR PHASE II	% OF TOTAL GRAIN	postsetting	S. side	S. side	2ry W div.
sample volume/ litres	3	12	12	6	12	2	14	10			6	9	5	10
fraction examined	0.5	1/1	0.5	1	1	0.25	1	1			1	1	1	1
TOTAL BARLEY RACHIS INTERNODES	0	1	0	0	0	0	0	1			0	1	0	0
TOTAL BARLEY GRAIN	0	0	0	0	1	0	0	0	3	3.03	0	0	0	0
ALL *T. s/d* GRAIN TYPES	0	16	29	4	2	0	0	0			0	1	13	7
ALL *T. s/d* GLUME BASE TYPES	0	383	220	17	80	2	4	17			8	19	90	22
TOTAL WHEAT GRAIN	0	16	29	4	2	0	0	0	78	78.79	0	1	13	7
TOTAL 'Indet.' GRAIN	0	0	7	3	4	0	2	1	18	18.18	0	0	2	2
TOTAL GRAINS	0	16	36	7	7	0	2	1	99		0	1	15	9
TOTAL CHAFF ITEMS	0	382	215	17	80	2	4	18	678		8	20	89	21
TOTAL SEEDS	1	19	1152	8	10	2	0	3	1229		1	3	14	4
Triticum s/d. GLUME BASE : GRAIN		23.94	7.59	4.25	40.00							19.00	6.92	3.14
TOTAL CHARRED ITEMS	1	417	1406	32	97	4	6	22			9	24	118	
COUNT DENSITY per litre	0.67	0.00	234.33	5.33	8.08	8.00	0.43	2.20			1.13	2.67	23.60	3.40
CATEGORY ASSIGNED	empty	chaff-rich	exception	chaff-rich	chaff-rich	empty	empty	empty			empty	chaff-rich	chaff-rich	chaff-rich
X= used for calc.of assemblage composition		x	x	excluded	x				4				x	
X= used ro examine weed flora types & ecology		x							2					

sample number	96	103	107	57	52	55	58	59	67	102	80		
context	[1444]	[1466]	[1515]	[1177]	[1104]	[1120]	[2012]	[2016]	[1400]	[2065]	[2021]		
feature	F.5435	F.5441	F.5453	F.5353	F.5345	F.5345	F.2013	F.2016	F.5425	F.2066	F.2022		
description	pit in encl.	pit in encl.	pit in encl.	ditch	E-W ditch	E-W ditch	inhumation	inhumation	pit in cem.	inhumation	inhumation		
period	III	III	III	III	III	III	III	III	III	III	III		
area	B	B	B	D	D	D	D	D	D	D	D		
group	S. side	S. side	S. side	W bound	W bound	W bound	cemetery	cemetery	cemetery	cemetery	cemetery	TOTALS FOR PHASE III	% OF TOTAL GRAIN
sample volume/ litres	8	11	10	12	12	12	10	15	10	8	6		
fraction examined	1	1	1	1	1	1	1	1	1	1	1		
TOTAL BARLEY RACHIS INTERNODES	0	0	0	0	0	0	0	0	0	0	0		
TOTAL BARLEY GRAIN	0	1	0	0	0	0	0	0	0	0	0	38.00	6.05
ALL *T. s/d* GRAIN TYPES	1	19	7	0	1	0	0	1	0	0	0		
ALL *T. s/d* GLUME BASE TYPES	0	121	18	0	0	0	6	0	1	0	3		
TOTAL WHEAT GRAIN	1	19	7	0	1	0	0	1	0	0	0	477.00	75.96
TOTAL 'Indet.' GRAIN	0	0	0	1	0	0	0	0	0	0	0	113.00	17.99
TOTAL GRAINS	1	20	7	1	1	0	0	1	0	0	0	628.00	
TOTAL CHAFF ITEMS	0	121	16	0	0	0	6	0	1	0	3	4301.00	
TOTAL SEEDS	0	17	3	0	0	0	0	0	0	0	0	723.00	
Triticum s/d. GLUME BASE : GRAIN			8.37	2.57									
TOTAL CHARRED ITEMS													
COUNT DENSITY per litre	0.13	14.36	2.80	0.08	0.08	0.00	0.60	0.07	0.10	0.00	0.50		
CATEGORY ASSIGNED	empty	chaff-rich	empty	empty	empty	empty	empty	empty	empty	empty	empty		
X= used for calc of assemblage composition		x										12	
X= used ro examine weed flora types & ecology												9	

Table 2.4 Summary of calculations for charred cereals and categorisations

context	feature	phase	area	Description
[1642]	F.5470	I-II	A	northern length of main enclosure ditch
[1646]	F.5480	III	A	E-W enclosure ditch to north of F.5480
[4166]	F.5621	Iron Age	E	pit in northern excavated area
[4188]	F.5624	II	E (&B)	ditch to north of main enclosure
[4215]	F.5626	I	E (&B)	pit, part of segmented ditch to north of main encl.

Table 2.5. Summary of waterlogged contexts in the 'northern zone'

context	feature	phase	area	description
[4334]	F.5651	I	A	ditch alongside aisled building
[4668]	F.5707	II-III	A	post-setting
[4649]	F.5704	III	A	pit, part of the circular timber shrine

Table 2.6. Summary of waterlogged contexts in the 'central zone'

Area	*Pot Count*	*Weight*	**Bone** Count	Weight
A	8508	137950	8931	173280
B	2297	33525	4167	72246
C	776	11239	1142	19743
D	582	3287	909	6562
E	579	9490	1648	19663

Table 2.7. Pottery & Bone quantities by Area

Area	Pottery	Bone
A	0.79	1.8
B	0.4	1.2
D	0.06	0.35

Table 2.8. Average weights (g) of pot and bone per litre of soil by area

	Pottery	Bone
Site mean	**144**	**315**
Area means		
A	206	343
B	145	380
C	154	318
D	46	187
E	113	298

Table 2.9. Mean densities of pottery and bone by weight per context for the site as a whole and by area (figures have been rounded off to the nearest whole number).

	gnawed	% of total	butchery marks	% of total	burnt	% of total	Total Bone
A	211	4,47	75	1,59	33	0,70	4725
B	86	6,07	26	1,84	12	0,85	1416
C	22	3,42	6	0,93	0	0,00	643
D	0	0,00	0	0,00	0	0,00	98
E	15	2,17	2	0,29	1	0,14	692

Table 2.10. Numbers of bones displaying specific taphonomic indicators by area

Area	MNE	EEE*	Completeness **	Average weight
A	1468	447.63	0.30	19.40
B	466	142.88	0.31	17.34
C	181	48.00	0.27	17.29
D	35	7.38	0.21	7.22
E	169	39.88	0.24	11.93

Table 2.11. Bone fragmentation by Area

* EEE = Estimated Element Equivalent, calculated by total number of zones (Z) divided by number of zones present (z) for each element, where Z = 8.
** Completeness calculated on MNE only, and based on EEE divided by MNE. Higher scores indicate more complete bones, lower scores, more fragmented/incomplete.

Area	Identifiable bone	Un-identifiable bone	Total	% Un-id
A	2746	1979	4725	*41.88*
B	554	862	1416	*60.88*
C	198	445	643	*69.21*
D	21	77	98	*78.57*
E	243	449	692	*64.88*

Table 2.12. Quantities of identifiable and unidentifiable bone by area

Area	MNV	EVE*	Completeness**	Average weight
A	3429	94.1	0.027	16.21
B	1275	29.26	0.023	14.59
C	406	7.92	0.020	14.48
D	100	1.28	0.013	5.65
E	293	6.76	0.023	16.39

Table 2.13. Pottery fragmentation by Area

* EVE = Estimated Vessel Equivalent, calculated by percentage of rim as a proportion of the whole.
** Completeness calculated by dividing EVE by MNV

Area A	**Average per unit context**		**average fragment weight**
	weight	*count*	
Bone	343	18	19.4
Pot	206	13	16.2
F5033 Test Pits	**Average per m²**		**average fragment weight**
	weight	*count*	
Bone	605	20	30.3
Pot	321	27	11.9

Table 2.14. Comparison of finds densities in Roman cut features and buried soils from the settlement core

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Feature	**Width (m)**	**Depth (m)**	**Spot Date**
F4801	1.8	0.5	-
F4815	1.3	0.4	240-400, 80-180, 140+, 140-240
F5273	2.1	0.6	-
F5543	2	1	45-180, 60-140, 240-400
F5321(4533)	2.6	0.9	270/300-400
F5470	1.7	0.5	70-140, 180+

Table 3.1. Ditches of G2 enclosure

	Posthole		*Postpipe*		
Feature	Diameter (m)	Depth (m)	Diameter (m)	Depth (m)	Spot Date
Main Posts					
F428	0.54	0.2	-	-	-
F540	0.95	0.4	0.5	0.35	120+ (240+ pp)
F543	0.81	0.24	0.45	0.24	120+

F546	0.8	0.27	0.34	0.21	120+
F640	0.65	0.2	0.2	0.2	-
F643	0.8	0.22	0.38	0.2	-
F5225	0.65	0.27	0.36	0.25	Upto 140
F5237	0.7	0.32	0.26	0.32	-
F5238	0.45	0.3	-	-	-
F5239	0.65	0.34	0.3	0.34	Upto c. 270
F5240	0.77	0.34	0.25	0.34	-
Secondary Posts					
F371	0.39	0.11	-	-	-
F756	0.43	0.07	-	-	-
F5284	0.4	0.2	-	-	-
F5257	0.55	0.12	-	-	-
F5258	0.54	0.25	-	-	-
F744	0.5	0.37	-	-	-
F729	0.4	0.29	-	-	-

Table 3.2. Dimensions of postholes/pipes of aisled building (G2.01)

Feature	Diameter (m)	Depth (m)	Spot Date
F5004	0.5	-	-
F5055	0.4	0.45	Upto 140
F5500	1.3	0.45	90-120
F5535	2.35	0.6	90-140
F5650	1.65	0.26	140-200
F5651	0.65	0.45	90-120

Table 3.3. Pit Group adjacent to the aisled building (G2.04)

	Weight	**%**	**EVEs**	**%**
Bowl	2	0.02	0,05	1,65
Cup	14	0.16	0,16	5,28
Dish	42	0.47	0,10	3,30
Jar	3745	41.72	2,37	78.22

Morataria	550	6,13	0,10	3,30
Storage jar	4521	50.36	0,20	6,60
Un-id	103	0.85	0,05	1,65
Total	8977	100.00	3,03	100.00

Table 3.4. Pottery vessels from Pit Group (G2.04)

Feature	Diameter (m)	Depth (m)	
Main Posts			
F5476	0.44	0.1	
F5477	0.63	0.12	
F5490	1.4	0.33	
F5491	1.2	0.32	
F5492	1.09	0.4	
F5516	0.56	0.22	
F5507	0.62	0.29	
F5565	0.5	0.14	
F5592	0.6	0.15	
F5605	0.5	0.15	
F5517	0.28pp/0.57ph	0.36pp/0.17ph	270+pp
F5591	0.56	0.2	
Subsidiary Posts			
F5475	0.3	0.1	
F5607	0.4	0.11	

Table 3.5. Dimensions of postholes in Shrine (G2.02)

Feature	**Diameter (m)**	**Depth (m)**	**Spot Date**
F1908	1.05	0.47	100-160
F5472	1.25	0.35	120-240
F5512			80-180
F5548	2.3	0.6	
F5549			
F5550	3	1.5	140-200
F5629	>1	0.1	

Table 3.6. Pit group on the western edge of the shrine structure (G2.02)

Context	Feature	type	phase	Sample volume/litres	Grain count	Chaff count	Seed count	Total count per litre soil
[1909]	F.1909	pit	I	10	88	457	110	65.50
[1938]	F.5522	ditch	I-II	8	26	89	27	17.75
[1630]	F. 5522	ditch	I-II	1	1	16	2	19.00
[1761]	F.5533	ditch	II	1	0	32	2	34.00
[3041]	F.5483	ditch	I-II	12	16	382	19	34.75

Table 3.7. summary of charred remains associated with the timber shrine

Forms	**EVEs**	**%**	**Weight**	**%**
Bowl	0.05	5	15	0.5
Dish	0.29	29	326	11.1
Jar	0.49	50	1991	67.9
Lid	0.16	16	25	0.8
Beaker	-	-	9	0.3
Flagon	-	-	6	0.2
Mortarium	-	-	31	1.1
Storage jar			529	18
	-	-		
Total	0.99	100	2932	100

Table 3.8 Summary of vessel forms associated with the timber shrine (Phase 1)

Feature	**Diameter**	**Depth**
F3009		
F5625		
F370		
F389		
F728		
F740		
F5236		

Table 3.9. Postholes of forecourt fencline (G2.16)

Feature	Diameter	Depth	Spot Date

F556	80-140
F603	80-180
F602	45-200
F625	140-200
F5247	70-180

Table 3.10. Pits in forecourt (G2.16)

Cremation	**Age/sex**	**Human bone (weight)**	**Animal bone (weight)**	**Associated finds**	**Type**	**Accessory vessels**
1 (F5035)	adult	1543g	-	Fe object	urned	Flagon inside vessel
2 (F5119)	subadult/young adult	616g	23g (sheep)	hobnail	urned	Small red vessel & glass vessel
3 (F5120)	subadult/adult	23g	(unid.)	-	urned	none
4 (F5121)	subadult/adult	104g	20g (sheep-size; charred & unburnt bone)	-	urned	none
5 (F5122)	subadult/adult	50g	<1g (unid.; unburnt)	-	urned	none
6 (F5305)	young/middle adult (?F)	808g	86g (sheep & chicken)	Fe nail	urned	Flagon inside vessel
7 (F5307)	adult (?F) & juvenile/subadult)	1260g	139g (sheep-size & chicken)	Fe nail	unurned	2 flagons and a small jar
8 (F5572)	middle adult	370g	3g (sheep)	burnt glass, Fe nail	urned	

Table 3.11 Summary of Cremations

Cremation	Depth of cut (cm)	Total weight of bone (human/animal)	Type
5035	25	1543	urned
5119	11	639	urned
5120	3	23	urned
5121	5	124	urned
5122	13	50	urned

5305	10	894	urned
5307	15	1399	unurned
5572	11	373	urned

Table 3.12 Degree of truncation/depth of cut and the weight of bone collected

Feature	Type	Width (m)	Depth (m)
F5619	pit	0.7	0.3
F5619	posthole	0.24	0.54
F5620	ditch	0.45	0.2
F5631	posthole	0.6	0.12
F5632	posthole	0.45	0.095
F4158	tree throw	1.4	0.43
F4195	pit	0.65	0.23
F4196	pit		
F4298	posthole	0.65	0.2
F4300	posthole	0.7	0.15

Table 3.13. G6 (north) features

Feature	Type	Width (m)	Depth (m)
F5021	pit?		
F5635	ditch?	0.7	0.4
F5636	ditch	0.4	0.12
F5637	pit	0.33	0.13
F5638	pit	1.6	0.2
F5641	ditch?	1.4	0.3
F5642	ditch?	0.8	0.18
F5643	ditch?	1.4	0.25

Table 3.14. G6 (west) features

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Context/Feature	Mg.P per100g.soil
[1889]/ F5542	148
[1928]/ F1929	136
[1930]/ F1931	134

Table 4.1. Phosphate readings for spot samples from pits

	weight	%	EVEs	%
Amphora	10	0,30	0	0,00
Bowl	178	5,29	38	23,75
Beaker	17	0,50	0	0,00
Cup	5	0,15	0	0,00
Dish	380	11,28	24	15,00
Flagon	21	0,62	0	0,00
Jar	865	25,68	77	48,13
Lid	16	0,48	5	3,13
Mortarium	290	8,61	6	3,75
Storage Jar	1433	42,55	10	6,25
Un-id	153	4,54	0	0,00
Total	3368	100,00	160	100,00

Table 4.2 Pottery vessels from the metalled surface (G2.08)

Contexts	Fill group	Spot date
711/464/588		120-260, 230-270
712	tertiary fills (later 3rd c.)	
713/618/507		240-300/120-180
714/469/506/598/619		140-240
715		
716	secondary fills (mid 3rd c.)	
717		230-280
718		120+
719	primary fills (early 3rd c.)	180-280
720		
721		230-280

Table 4.3. Fills sequence for Well F5280

	weight	%	EVEs	%
Bowl	108	1.57	0.48	11.9
Beaker	38	0.55	-	-
Dish	76	1.10	0.10	2.5
Flagon	219	3.18	-	-
Jar	4867	70.69	3.02	75.1
Lid	113	1.64	0.17	4.2
Mortaria	119	1.73	0.10	2.5
Storage jar	1333	19.36	0.15	3.7
Un-id	12	0.17	-	-
Total	6885	100	4.02	100

Table 4.4 Pottery vessels from well F5280

	Species						
Element	cow size	cow	horse	sheep size	sheep/goat	un-id	Grand Total
astragalus	-	1	-	-	-	-	1
atlas	-	1	-	-	-	-	1
carpal	-	-	3	-	-	-	3
femur	-	1	-	-	1	-	2
humerus	-	-	1	-	-	-	1
loose teeth	-	6	-	-	-	-	6
mandible	-	2	-	-	-	-	2
metacarpal	-	-	2	-	-	-	2
metatarsal	-	-	1	-	-	-	1
phalange	-	-	1	-	-	-	1
patella	-	-	1	-	-	-	1
pelvis	-	-	1	-	-	-	1
radius	-	-	2	-	1	-	3
rib	4	-	10	3	-	-	17
sacrum	-	-	1	-	-	-	1
scapula	1	-	1	-	-	-	2
shaft	-	-	-	1	1	-	2
skull	-	-	1	-	-	-	1
ulna	-	-	1	-	-	-	1
vertebra	1	-	-	-	-	-	1
lumbar vert.	-	-	5	-	-	-	5
thoracic vert.	-	-	8	-	-	-	8
un-id.	-	-	-	-	-	79	79
Grand Total	6	11	39	4	3	79	142
%	4.23	7.75	27.46	2.82	2.11	55.63	100.00

Table 4.5 Associated animal bone with shrine (G2.02, phase II)

Feature	**Diameter (m)**	**Depth (m)**	**Spot date**
Beam slot			
F848			140-240, 240-300
Postholes			
F798	0.41	0.28	
F799	0.4	0.29	
F800	0.38	0.17	
F801	0.64	0.3	
F802	1.2	0.32	
F803	0.5	0.17	
F812	0.5	0.21	
F814	0.52	0.15	
F4557			
F746	0.6	0.33	
F4498			
Adjunct			
F821			
F822			
F823			
F824			
F813	0.42	0.26	
F4556	0.4	0.14	
F805	0.45	0.19	
F806			

Table 4.6. Structure G2.06

Feature	Diameter	Depth	Spot date
F4886	3.9	0.5	140-240
F5709			120-200
F4646			60-260
F4645			60-260
F4644			

F4691

F4639

Table 4.7. Pit group 2.09

	weight	%	EVEs	
Beaker	4	0,57	0	0,00
Flagon	70	10,00	0	0,00
Jar	173	24,71	24	88,89
Lid	3	0,43	3	11,11
Storage Jar	427	61,00	0	0,00
Un-id	23	3,29	0	0,00
Total	700	100,00	27	100,00

Table 4.8 Pottery from Curvilinear enclosure (G2.11), phase II

Feature	Diameter (m)	Depth (m)
4568	0.32	0.28
4570	0.4	0.7
4572	0.2	0.15
4574	0.4	0.4
4676	0.26	0.14
4701	0.3	0.15
4702		

Table 4.9. The postholes within enclosure gully (G2.12)

Context	Feature	Phase	Type	Sample volume/ litres	Grain count	Chaff count	Seeds count	Total count per litre soil
[1374]	F.5427	II-III	ditch	9	1	20	3	2.67
[1476]	F.5427	II-III	ditch	5	15	89	14	23.60

Table 4.10. Charred remains from F5427.

Feature	Diameter/width (m)	Depth (m)	Spot Date
Posts			
1955	0.43	0.36	
1956	0.35	0.13	
4173			
4175			
Slots			
4174			240+
5544	0.6	0.36	
5545	0.85	0.4	45-140
5633	0.48	0.26	
5672	0.4	0.16	

Table 4.11. Group 11.01 Structure B

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Context	Feature	phase	Sample volume/ litres	Grain count	Chaff count	Seeds count	Total count per litre soil
[1575]	F.5501	III	10	9	21	4	3.40
[1792]	F.5501	III	10	35	144	75	25.70
[1646]	F.5480	III	3	0	8	0	2.67

Table 5.1. charred remains associated with western divisions of the core area.

Feature	Diameter	Depth	Spot Date
F710			270+
F700			270+
F5208			300+
F5207			300+
F5527			270+
F5233			300+

F5232	300+
F5219	240+
F5263	300+

Table 5.2. Forecourt Pits (G2.16)

Element	cow	pig	sheep	cow size	sheep size	un-id	Grand Total
Skull	4	1		1			6
Manible	9	1	3	1			14
Loose teeth	3						3
Atlas	1						1
Axis	1						1
Scapula	5	1					6
Humerus	5		3				8
Radius	6						6
ulna	1						1
Pelvis	5			1			6
sacrum	1						1
Femur	3			1			4
Tibia	4		1				5
patella	1						1
Astragalus	3						3
Calcaneum	2						2
Tarsal	9						9
Metacarpal	3						3
Metatarsal	10						10
Metapodial	3						3
1st Phalange	4						4
2nd Phalange	3						3
3rd Phalange	2						2
Rib				11	2		13
Shaft				3	6		9
Cervical vert.	5						5
Vertebrae				22			22
Un-id						148	148
Grand Total	93	3	7	40	8	148	299

Table 5.3. Faunal remains from curvilinear enclosure (G2.11, phase III)

Context	feature	Sample volume/ litres	Grain count	Chaff count	Seed count	Total count per litre soil	Comments
[4602]	F.5652	6	27	548	45	103.33	
[4683]	F.5652	10	7	12	14	3.30	
[4649]	F.5704	2.5	6	20	8	13.60	Waterlogged
[4901]	F.5741	3.5	89	1579	96	504.00	Damp

Table 5.4. Charred remains associated with the curvilinear enclosure

	weight	%	EVEs	%
Amphora	52	0,84	0	0,00
Bowl	378	6,09	75	13,69
Beaker	129	2,08	7	1,28
Cup	10	0,16	5	0,91
Dish	724	11,66	95	17,34
Flagon	169	2,72	133	24,27
Jar	2109	33,96	191	34,85
Lid	63	1,01	16	2,92
Mortaria	556	8,95	15	2,74
Storage Jar	1719	27,68	7	1,28
Un-id	302	4,86	4	0,73
Total	6211	100,00	548	100,00

Table 5.5 Pottery from the curvilinear enclosure

Function	EVEs	%
Cooking	31	5,6
food preparation	15	2,7
service	154	28,1
storage	7	1,3
Un-id.	341	62,2
Grand Total	548	100

Table 5.6 Summary of pottery by Vessel function from G2.11

Feature	Diameter	Depth	Spot Date
F5105			
F5036			
F449			

F447		
F448		
F5037		
F5060		
F5045		
F5226		45-140

Table 5.7. Postholes (G2.15)

Feature	Width/diameter (m)	Depth (m)	Spot Date
5116	0.8/2.35	0.32/0.29	300-400, 270-300
575			300-400
580			300-400
582			300-400
583		0.1	300-400
586	0.7	0.15	
614	0.2/2	0.3	240-300, 300-400
622			
649	0.8	0.28	300-400
652	0.8	0.15	300-400
684	2.6	0.28	300-400
708			
755	0.75	0.1	240-300
5200	2.25/1.6/1.9	0.25/0.35/0.55	300-400, 325-400
5201		0.44	270-400, 340-400
5202	1.3	0.4/0.38	240-300, 300-400
5203	1.3	0.12	
5206	0.8	0.15	300-400
5223	0.7	0.32	
5245	0.95/2.15	0.49/0.54	300-400
5255	0.44	0.36	
5260	1.25	0.27	
5288		0.25	
5294	0.6	0.14	
5296	0.7	0.15	270-400

Table 5.8 Eastern group of pits

Feature	Width/diameter (m)	Depth (m)	Spot Date
5561	1.7	0.1	
5562	1.8	0.16	
5584	0.8	0.25	
5585	1.35	0.25	300-400
5586	0.8	0.2	
5589	0.2	0.12	
5602	0.8/0.32	0.15/0.65	
5623			
5647	0.22	0.11	
5648			
5649			
5653	1.1	0.07	
5654	1.5	0.1	
5655	1.25	0.7	
5664	0.7	0.2	

Table 5.9. Western group of pits

Context	Feature	Phase	Type	Sample volume/ litres	Grain count	Chaff count	Seeds count	Total count per litre soil
[1486]	F.5441	III	pit	11	20	121	17	14.36
[1515]	F.5453	III	pit	10	7	16	3	2.60
	F.5435	III	Pit					
[1532]	F.5452	III	ditch	14	13	200	22	16.79

Table 5.10. Plant remains from pits

	North-South	*East-West*
Eastern side	2073, 2036, 2025, 2028, 2010, 2069, 2046, 2064, 2042	2076, 2086, 2007, 2061, 2013, 2001, 2016, 2039,
Western side	2082, 2058, 2019,	2031, 2044, 2079
Within ditch F5403	2034, 2022, 2055	2052

Table 5.11. Orientation and location of burials (G22)

Grave fill	Age	Sex	Skeleton from which they derive
2000	juvenile	-	2061
2021	mature adult	M	?
2024	adult & mid/mat. adult	? & F	2028 and 2049
2027	adult		2049
2038	infant	-	2042

Table 5.12. Disarticulated bones from grave fills

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Type	No. of fragments
Tegula	37
Imbrex	17
Box tile	5
Brick	83

Table 6.1. Different types of identifiable ceramic building material

	Foreleg		**Hindleg**		**Side**
	Left	*Right*	*Left*	*Right*	
Cow	3	-	1	2	3
Horse	1	-	1	-	2
Pig	1	1	-	-	-
Total	**4**	**1**	**2**	**2**	**5**

Table 6.2. Summary of deposits of meat cuts

	Count	Weight
IRON SLAGS		
Cinder	2	29g
Hearth Bottom	8	845g
Slag	22	329g
Smithing Slag	2	15g
NON-SPECIFIC TYPES		
Vitrified hearth lining	4	57g
Vitrified clay	2	13g
Total	**40**	**1288g**

Table 6.3. The slag and related fragments from excavated contexts.

	Phase I	**Phase II**	**Phase III**
lava	958	2326	2684
millstone	4287	8947	28232
greensand	281	6000	2841
red sandstones	-	-	1515
puddingstone	-	-	13000

Table 6.4. Quernstones by phase (weights in g)

E-W Graves	line	row	uncertain
Northern side	6	0	1
Southern side	1	1	0
Western side	1	0	3
N-S Graves	line	row	uncertain
Northern side	0	0	0
Southern side	0	10	0
Western side	0	3	3

Table 6.5. Arrangement of graves in the inhumation cemetery

Christian indicators	**pagan indicators**
east-west alignment	north-south alignment
neonatal/infant burial	hobnails
cemetery organisation	superimposition/disturbance
lack of grave goods	presence of grave goods
focal grave	(prone)

Table 6.6 Christian and pagan indicators

	e-w	n-s	coffin	hobnails	overlapping	vessel	jewellery	inversion
e-w	-	0	3	3	9	1	2	3
n-s		-	5	4	9	2	3	3
coffin			-	4	5	2	1	3
hobnails				-	4	3	1	2
overlapping					-	2	4	4
vessel						-	0	1
jewellery							-	2
inversion								-

Table 6.7. Absolute numbers of co-occurrence

	e-w	n-s	coffin	hobnails	overlapping	vessel	jewellery	inversion
e-w	-	-1.00	0.22	0.32	0.64	0.08	0.24	0.44
n-s		-	0.57	0.47	0.44	0.59	0.50	0.33
coffin			-	0.79	0.48	0.80	0.00	0.68
hobnails				-	0.38	1.00	0.08	0.46
overlapping					-	0.52	0.74	0.54
vessel						-	-1.00	0.47
jewellery							-	0.64
inversion								-

N.B. 1.00 = positive co-variation, -1.00 = negative co-variation, 0 = no co-variation

Table 6.8. Yule-values of co-variation

	E-W	(n=13)	**N-S**	(n=16)
	No.	*%*	*No.*	*%*
calculus	6	46.15	2	12.5
caries	3	23.08	2	12.5
enamel hypoplasia	2	15.38	1	6.25
ante-mortem tooth loss	4	30.77	5	31.25

Table 6.9. Occurrence of dental pathologies according to burial orientation

	Number of individuals	Cumulative count	Cumulative %
<6 months	5	5	13.51
0-4 years	1	6	16.22
5-12 years	1	7	18.92
13-18 years	2	9	24.32
19-25 years	10	19	51.35

26-45 years	12	31	83.78
45 years +	6	37	100.00

Table 6.10. Summary age data for all burials

	Jewellery	Other	None
Female	4	1	4
Male	0	0	5
Unsexed	1	0	10

Table 6.11. Summary of grave goods with cemetery inhumations

	non-grave	grave	total
brooches	4	0	4
bracelets	9	6	15
finger ring	0	2	2
hairpins	4	0	4
bead	1	6	7
other dress	4	0	4
toiletries	3	0	3
other personal	8	0	8

Table 6.12 Numbers of personal items from the site

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Taxa	English name	Total no. of seeds counted	No. of samples where present
Anthemis cotula	stinking chamomile	176	20
Bromus spp.	brome grass	81	9
small *Trifolium* sp.	small-seeded clover <2mm	59	18
Rumex sanguineus/	small-seeded docks	53	11
[illegible]			
Avena sp.	wild/cultivated oat	40	12
Atriplex patula/prostrata	common/spear-leaved orache	39	12
small *Vicia/Lathyrus* sp.	vetches/wild pea <2mm	35	13
Phleum bertolonii	lesser cat's-tail	32	14
Lolium c.f. *multiflorum*	Italian rye-grass	31	4
Trifolium/Medicago sp.	clover/medick	26	5
large Poaceae indet.	grasses > 4mm	26	4
medium *Vicia/Lathyrus* sp.	vetch/wild pea (2-4mm)	27	9

Table 7.1 summary of the major charred wild seeds within all contexts except [717]

	I	II	III
foetal	0	0	2
<1 yr	20	0	3,2
<2 yrs	0	12,5	3,1
<3 yrs	33,3	12,5	6,7
< 4yrs	30	41	23,6

Table 7.2 Fusion data (% unfused) for cattle by phase

	I	II	III
0-1m	0	0	0
1-8m	0	0	1
8-18m	1	2	3
18-30m	0	2	4
30-36m	0	1	3
young adult	1	0	3
adult	1	0	10
old adult	0	2	10
senile	0	0	0

Table 7.3 Mandibular stage data (MNI) for cattle by phase

	I	II	III
foetal	0	40	0
<1 yr	0	33,3	9,5
<2 yrs	0	0	1,7
<3 yrs	0	20	5,8
< 4yrs	0	0	22,2

Table 7.4 Fusion data (% unfused) for sheep by phase

	I	II	III
0-2m	0	0	0
2-6m	0	0	0
6-12m	0	0	1
1-2 yrs	2	1	9
2-3 yrs	0	3	3
3-4 yrs	2	1	7
4-6 yrs	1	0	4
6-8 yrs	0	0	0

8-10 yrs	1	0	0

Table 7.5. Mandibular stage data (MNI) for sheep by phase

% unfused	
foetal	5,8
<1 yr	0
<2 yrs	25
<3 yrs	0
< 4yrs	10,7
Mandibular stage	
neonate	0
immature	0
subadult	2
adult	1
elderly	2

Table 7.6 Aging data for pig for phase III

	New Hall		**Vicar's Farm**		**Orton Hall Farm**	
	NISP	*%*	*NISP*	*%*	*NISP*	*%*
Cow	391	51	1152	59,4	1814	60,5
Pig	34	4,4	45	2,3	95	3,2
Sheep/goat	252	32,8	404	20,9	1005	33,5
Horse	88	11,5	318	16,4	85	2,8
Fowl	2	0,3	19	1	-	-

Table 7.7 Proportion of main domesticates from 3 Roman sites

	Phase I (AD 80-180)	**%**	**Phase II (AD 180-270)**	**%**	**Phase III (AD 270-410)**	**%**
Drinking vessels						
flagon	2	14.91	1.61	6.32	5.02	5.41
beaker	0	0.00	1.02	4.00	1.55	1.67
cup	0.21	1.57	0.1	0.39	0.36	0.39
Food vessels						
platter	0.05	0.37	0	0.00	0	0.00
dish	1	7.46	3.78	14.84	16	17.24
bowl	0.77	5.74	3.78	14.84	13.66	14.72
jar	8.58	63.98	12.89	50.61	43.97	47.38

lid	0.05	0.37	0.41	1.61	1.68	1.81
mortarium	0.15	1.12	0.88	3.46	3.83	4.13
storage jar	0.55	4.10	0.95	3.73	6.18	6.66
Un-identified						
open form	0.05	0.37	0	0.00	0.17	0.18
closed form	0	0.00	0.05	0.20	0.39	0.42
Total	**13.41**	**100.00**	**25.47**	**100.00**	**92.81**	**100.00**

Table 7.8. Vessel forms by phase (eves)

	Phase I	Phase II	Phase III
Jar	0.29	1.31	4.57
Bowl	-	-	0.18
Dish	-	-	0.56
Total	*0.29*	*1.31*	*5.31*
% of total assemblage	**4.7**	**10.9**	**14.6**

Table 7.9. Vessels with sooting residues (in eves)

	cow	**ovicaprid**	**horse**	**pig**
Head				
skull	55	23	8	4
mandible	117	69	14	28
loose teeth	141	68	78	7
atlas	16	1	3	2
axis	8	0	1	0
cervical vert.	23	0	7	0
Torso		0		
thoracic vert.	18	0	25	0
lunbar vert.	7	0	12	0
vert	9	2	1	0
rib	16	0	26	0
Foreleg		0		
scapula	68	16	15	21
humerus	66	25	15	20
radius	78	58	23	20
ulna	21	3	16	18
carpal	31	2	10	0
metacarpal	69	16	9	7
Backleg		0		
pelvis	68	21	15	21

sacrum	7	0	2	0
femur	75	17	14	15
tibia	65	51	14	10
fibula	0	0	1	0
calcaneus	34	3	4	2
astragalus	34	5	4	1
tarsal	21	1	5	0
metatarsal	65	18	16	1
Other		0		
metapodial	39	31	6	1
phalanges	125	22	17	3
patella	5	0	2	0

Table 7.10. Summary of element representation for major domesticates (NISP)

	Phase I	Phase II	Phase III
cow	50 : 50	45 : 55	39 : 61
ovicaprid	47 : 53	41 : 59	40 : 60
horse	43 : 57	53 : 47	61 : 39
pig	33 : 67	50 : 50	43 : 67

Table 7.11. Ratio of meat bearing to non-meat bearing bones of main domesticates (expressed as percentage by NISP)

	Phase I		**Phase II**		**Phase III**	
	NISP	%	NISP	%	NISP	%
Cow	53	52	140	60	910	57
*Pig**	3	3	5	2	56	3
Sheep	26	26	48	20	298	19
Goat	0	0	1	0	8	0
Horse	11	11	39	17	245	15
Fowl	8	8	2	1	89	6
Total	101	100	235	100	1606	100

* Excludes pig group from F5499

Table 7.12. Summary of Main Domesticates by NISP

Phase	Weight (g)
I	619
II	1205
III	6154

Table 7.13. Quantities of oyster shell by phase

WARE	CODE	Phase I		Phase II		Phase III		Grand Total*
Continental Imports		EVEs	%	EVEs	%	EVEs	%	EVEs
Terra Nigra	TN	5	0,24	0	0,00	0	0,00	5
Samian	SGSM	11	0,52	0	0,00	5	0,06	16
	CGSM	100	4,73	39	1,77	27	0,31	178
	EGSM	22	1,04	0	0,00	30	0,35	52
	Un-id SM	0	0,00	5	0,23	15	0,17	20
Central-Gaulish colour-coated	CG1 CC	0	0,00	0	0,00	0	0,00	0
	CG2 CC	0	0,00	0	0,00	0	0,00	0
Moselkeramik	TRCC	0	0,00	0	0,00	0	0,00	0
Amphorae	GAUL	0	0,00	0	0,00	0	0,00	0
	BAET	0	0,00	0	0,00	0	0,00	0
Regional Imports								
Nene Valley	NVCC	25	1,18	260	11,81	1626	18,97	2077
	NVGR	0	0,00	0	0,00	35	0,41	45
	NVWW	5	0,24	16	0,73	135	1,57	192
Much Hadham	HADBS	10	0,47	0	0,00	129	1,50	146
	HADGR	4	0,19	4	0,18	16	0,19	24
	HADRE	16	0,76	92	4,18	893	10,42	1067
	HADWS	0	0,00	0	0,00	6	0,07	6
Oxfordshire	OXRE	20	0,95	47	2,14	241	2,81	365
	OXWS	0	0,00	0	0,00	0	0,00	0
	OXWW	0	0,00	0	0,00	61	0,71	67
Colchester	COLCC	0	0,00	75	3,41	15	0,17	90
Verulanium Region	VRWW	40	1,89	0	0,00	0	0,00	40
Black-Burnished Type 2	BB2	90	4,26	0	0,00	0	0,00	90
Shell-tempered ware	SMSW	54	2,56	287	13,04	1419	16,55	1956
Mancetter-Hartshill	MAHWW	0	0,00	0	0,00	27	0,31	27
Alice Holt	AHGR	0	0,00	0	0,00	10	0,12	10
Local Imports								
Foxton type	ROM1 GR	0	0,00	0	0,00	0	0,00	65
Cherry Hinton/Greenhouse Farm type	CH/GR	0	0,00	0	0,00	0	0,00	0
Grog-tempered ware	GROGPNK	0	0,00	0	0,00	10	0,12	10
Horningsea ware	HORNWS	0	0,00	0	0,00	5	0,06	5
	HORNBB	0	0,00	26	1,18	125	1,46	151
	HORNGR	0	0,00	15	0,68	96	1,12	111
	HORNRE	10	0,47	0	0,00	20	0,23	30
Harston Red Slipped ware	HARCC	0	0,00	52	2,36	129	1,50	191
Cam Valley wares	FSGR	33	1,56	153	6,95	400	4,67	654
	FSRE	105	4,97	0	0,00	51	0,59	204
	FSBB	0	0,00	0	0,00	83	0,97	89
	FSBW/WW	0	0,00	5	0,23	21	0,24	26
	CSBB	263	12,45	474	21,54	910	10,62	1937
	CSGR	683	32,34	498	22,63	1133	13,22	2657
	CSRWS	90	4,26	10	0,45	10	0,12	152
	CSRE	321	15,20	127	5,77	734	8,56	1279
	CSRGS	0	0,00	0	0,00	0	0,00	0
	CSBW/WW	205	9,71	6	0,27	112	1,31	333

Un-id finewares/colour-coats	-	0	0,00	10	0,45	43	0,50	53
Un-id coarsewares	-	0	0,00	0	0,00	0	0,00	0
Grand Total		**2112**	**100,00**	**2201**	**100,00**	**8572**	**100,00**	**14420**

* Includes unphased pottery

Table 7.14 Summary of Pottery wares by phase (in EVEs)

WARE	**CODE**	**Phase I**		**Phase II**		**Phase III**		**Grand Total***
Continental Imports		Weight	%	Weight	%	Weight	%	Weight
Terra Nigra	TN	25	0,08	0	0,00	0	0,00	25
Samian	SGSM	40	0,12	3	0,01	7	0,01	67
	CGSM	487	1,49	332	0,99	360	0,40	1295
	EGSM	37	0,11	139	0,41	74	0,08	274
	Un-id SM	0	0,00	1	0,00	16	0,02	17
Central-Gaulish colour-coated	CG1 CC	0	0,00	5	0,01	0	0,00	5
	CG2 CC	1	0,00	0	0,00	0	0,00	1
Moselkeramik	TRCC	0	0,00	1	0,00	0	0,00	1
Amphorae	GAUL	0	0,00	1345	4,00	483	0,53	1828
	BAET	0	0,00	0	0,00	176	0,19	176
Regional Imports								
Nene Valley	NVCC	238	0,73	2085	6,20	9868	10,89	13320
	NVGR	0	0,00	131	0,39	207	0,23	388
	NVWW	130	0,40	451	1,34	2815	3,11	3621
Much Hadham	HADBS	23	0,07	99	0,29	873	0,96	1061
	HADGR	14	0,04	21	0,06	172	0,19	207
	HADRE	149	0,46	932	2,77	6265	6,91	7907
	HADWS	0	0,00	0	0,00	54	0,06	54
Oxfordshire	OXRE	92	0,28	394	1,17	2986	3,29	3763
	OXWS	0	0,00	0	0,00	11	0,01	11
	OXWW	18	0,05	17	0,05	831	0,92	942
Colchester	COLCC	2	0,01	287	0,85	136	0,15	425
Verulanium Region	VRWW	648	1,98	0	0,00	0	0,00	648
Black-Burnished Type 2	BB2	118	0,36	0	0,00	0	0,00	118
Shell-tempered ware	SMSW	508	1,55	3425	10,19	13143	14,50	18331
Mancetter-Hartshill	MAHWW	0	0,00	82	0,24	479	0,53	592
Alice Holt	AHGR	0	0,00	0	0,00	142	0,16	142
Local Imports								
Foxton type	ROM1 GR	0	0,00	0	0,00	0	0,00	37
Cherry Hinton/Greenhouse Farm type	CH/GR	67	0,20	0	0,00	0	0,00	67
Grog-tempered ware	GROGPNK	1	0,00	0	0,00	23	0,03	24
Horningsea ware	HORNWS	0	0,00	0	0,00	116	0,13	116
	HORNBB	0	0,00	73	0,22	551	0,61	624
	HORNGR	610	1,86	1446	4,30	7200	7,94	9351
	HORNRE	1012	3,09	647	1,92	3214	3,55	5067
Harston Red Slipped ware	HARCC	78	0,24	239	0,71	323	0,36	718
Cam Valley wares	FSGR	483	1,48	1024	3,05	2335	2,58	4172
	FSRE	113	0,35	194	0,58	798	0,88	1330
	FSBB	6	0,02	12	0,04	328	0,36	346
	FSBW/WW	73	0,22	9	0,03	67	0,07	156

	CSBB	4228	12,91	3619	10,77	7894	8,71	18030
	CSGR	14920	45,57	10460	31,12	16705	18,43	48260
	CSRWS	607	1,85	151	0,45	154	0,17	1799
	CSRE	7026	21,46	5697	16,95	10610	11,70	26131
	CSRGS	0	0,00		0,00	2	0,00	2
	CSBW/WW	988	3,02	262	0,78	646	0,71	2148
Un-id CC	-	2	0,01	31	0,09	472	0,52	568
Un-id CW	-	0	0,00	0	0,00	292	0,32	302
Grand Total		**32744**	**100,00**	**33614**	**100,00**	**90652**	**100,00**	**174283**

* Includes unphased pottery

Table 7.15. Summary of pottery wares by phase (by weight in grammes)

Rock Type	**Number of fragments**	**Weight (kg)**
Millstone Grit	**41** (33.1%)	**33.840** (34.5%)
Lower Greensand	**20** (16.1%)	**11.257** (11.5%)
Collyweston Slate	**16** (12.9%)	**3.881** (4.0%)
Neidermendig Lava	**13** (10.5%)	**5.119** (5.2%)
Chlorite Schist	**4** (3.2%)	**2.515** (2.6%)
Dark Mudstone	**4** (3.2%)	**0.868** (0.9%)
Hertfordshire Pudding Stone	**3** (2.4%)	**9.364** (9.5%)
Kentish Ragstone	**3** (2.4%)	**0.229** (0.2%)
Old Red Sandstone	**3** (2.4%)	**1.883** (1.9%)
Upware Limestone	**3** (2.4%)	**6.487** (6.6%)
Chalk	**2** (1.6%)	**0.271** (0.3%)
Quartz Vein	**2** (1.6%)	**1.365** (1.4%)
Bunter Pebble	**2** (1.6%)	**0.030** (0.03%)
Ketton Stone	**1** (0.8%)	**18500** (18.9%)
Permian Sandstone	**1** (0.8%)	**0.032** (0.03%)
Volcanic Material	**1** (0.8%)	**0.049** (0.05%)
Wenlock Limestone ?	**1** (0.8%)	**0.090** (0.1%)

Table 7.16. Summary of petrology of worked stone

	Vicar's Farm	Haddenham	Stonea	Haddon
dress	36	19	52	13
toiletries	3	0	19	1
other personal	7	1	0	1
military	6	0	??	1
writing	1	0	1	0
trading	4	0	5	1
craft	5	0	9	1
gaming	2	1	10	0
coins	339	??	??	81

Table 7.17 Finds categories from four sites