Making time work: sampling floodplain artefact frequencies and populations

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Method

The expansion of large-scale excavation in Britain and parts of Continental Europe, funded by major development projects, has generated extensive new datasets. But what might we be losing when surfaces are routinely stripped by machines? Investigation by hand of ploughsoils and buried soils in the Fenlands of eastern England reveals high densities of artefacts and features that would often be destroyed or overlooked. These investigations throw new light on the concept of site sequences where features cut into underlying ground may give only a limited and misleading indication of the pattern and timing of prehistoric occupation. The consequential loss of data has a particular impact on estimates of settlement density and population numbers, which may have been much higher than many current estimates envisage.

Keywords: eastern England, prehistory, sampling, artefact frequency, settlement density

Introduction

It is increasingly clear that many of the residues of later prehistoric occupation only now occur within ploughsoil and sealed buried soil deposits. In the light of this it has recently been argued that the extensive machined site exposures now so widely practiced within Britain (as well as much of the Continent)—where these superficial horizons are often stripped off with little or no sampling—simply represent sub-standard excavation procedures (e.g. Evans 2012, 2013). There is nothing new in this and such arguments have long been versed (e.g. Champion 1978). It is just that now, with developer funding and the vast areas and sums involved, these procedures are all the more negligent. Of course, pragmatic constraints are usually the prime determinant. Yet digging in this manner and then presenting site narratives without any serious consideration of just what loss of data these direct 'stripping-down-to-geology' techniques entail is entirely unjustified and can only purport to be a severely truncated archaeology. Ever larger site-areas are certainly being tackled, but the

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quantity (and quality) of archaeology recovered is often not directly proportional. While through these means much large-scale landscape patterning is for the first time coming to light, along the way a tremendous amount is also clearly being lost.

Currently, continuity of occupation through time across large site-areas is far too often claimed based on little more than type-ware 'tick-box' presence. In a typical British later Neolithic to Early Bronze Age sequence this listing would extend to Grooved Ware, Beaker, Collared Urn and so on. Frankly, such approaches are ridiculous. The periods in question lasted hundreds of years and to say that the recovery of a handful of pits—that might together amount to a decade's use—attests to continuity over their full span quite simply doesn't add up. If we want seriously to discuss both settlement continuity and its disruptions then the record requires far more nuancing. It is this that this paper's title-prefix refers to. It is not, of course, a matter that 'time doesn't work' (as if so many Dalí 'soft watches'), but that site and landscape investigation must take account of this missing horizontal-spread dimension if sequences are to unfold in any meaningful way. In short, it is imperative that time and sequences are 'filled' to a greater extent and more convincingly.

This paper is not concerned with theoretical dimensions of time and its scaling (Lucas 2005, 2008; Lock & Molyneaux 2006). Its aims, instead, are more pragmatic, outlining what are, in effect, three case studies arising from the Cambridge Archaeological Unit's Barleycroft Farm/Over investigations. Two have to do with the nature of domestic occupation registered within buried soil horizons and are, respectively, based on artefact density and feature resolution. The other involves the excavation of upstanding turf-built barrows and their representation of the dead in terms of frequency; it explores the implications for modelling contemporary populations and, with it, labour and how it reflects upon widely held concepts of social hierarchy (i.e. chieftainship).

Let it be stated from the outset that approaches advocated here are, in many respects, opposed to current theories of fragmentation (e.g. Chapman & Gaydarska 2007) and what, in effect, is their celebration of 'partial-ism'. Yes, site traces are invariably distorted as long-term natural and human reduction dynamics conspire to erode survival and intelligibility (Reynolds & Barber 1984). Rather, in a belief that 'numbers are good to think with too' (after Bloch 1998 after Lévi-Strauss 1966 [1962]), what in response is necessary is statistical modelling of the range of what survives in order to attempt to gauge 'past totalities' (see Champion 1978 and Evans *et al.* 2006 on the much-vaunted *chimera* of 'total archaeology').

Sampling a great river—Barleycroft Farm/Over

As opposed to earlier, more informal 'old ground surface' or 'cultural layer' investigations (e.g. Clark *et al.* 1960), it was in such projects as Etton and Haddenham during the 1980s that systematic sampling of buried soil was first regularly applied in Britain (Pryor 1998; Evans & Hodder 2006a & b; see also French 2003). It was recognised that these ubiquitous mixed prehistoric soil horizons held meaningful artefact distributions, and variously tested positive for chemical traces (magnetic susceptibility and phosphate), but it took time to establish the appropriate means for sampling them. During the first season at Haddenham in 1981, for example, the attempt was made to hand-excavate the buried soil. Yet trying to articulate the characteristic 'swirls' and local discolourations within its matrix proved fruitless. Only at the close of the season was it realised that this layer actually sealed the ditches of the Upper Delphs causewayed enclosure (with Roman-period ditches cutting through this overlying soil).

The survival of buried soil strata is largely dependent upon the depth of a site's overburden and often these layers are completely eradicated by modern ploughing, with their artefact-content then dispersed throughout the topsoil. While, in theory, the sampling techniques discussed here are also applicable to ploughsoil horizons—despite that the survival of pottery (*versus* flint) will generally be poorer—the problem then is the need for much larger volumes of sampling units to compensate for the vertical displacement of finds upward within ploughsoil (see e.g. Crowther 1983; Boismier 1997). The artefacts caught up in 0.2m depth of buried soil within a metre-square, if vertically dispersed through a 0.6m thick ploughsoil, will require a three-times greater (cubic) sampling-measure to establish equivalence. It is for this reason that the results of in-depth, volumetric topsoil sampling often prove so disappointing and generate very low numbers of finds (e.g. Garrow *et al.* 2006: 20, 74; Cooper & Edmonds 2007: 14–18). In such instances, surface collection through fieldwalking is the more apt technique although, owing to variable surface conditions, its results are usually much less suited to direct statistical comparison.

Essentially arising from out of a 1980s post-processual/processual archaeology 'interface'—particularly the latter's concern with methodology—the Cambridge Archaeological Unit has for decades now tried, whenever feasible, to sample soil-cover horizons in its major landscape projects. This today results in a substantive comparative archive of surface-artefact densities and site-type distributional 'signatures' (e.g. Edmonds *et al.* 1999; Evans 2000a; Gdaniec *et al.* 2008). The Unit's methodological 'flagship' has, for nearly 20 years, been the programme at Barleycroft Farm/Over. There the Needingworth Quarry, operated by Hanson Aggregates, will eventually extend over *c.* 800ha straddling both banks of the River Great Ouse where it debouches into the Fen marshlands (Figure 1).

From the outset, the project has been approached as a deep floodplain/fen 'landscape laboratory'. The 1–4m depth of its peat and alluvial cover has generally precluded aerial photographic site-detection and, in recompense, various retrieval techniques have been experimented with (see e.g. Evans & Knight 2000; Evans 2011). Its abiding research directive has been the status of a major river in prehistory: when did that river act as a territorial divide and when as a communication corridor through the land? Admittedly, this agenda has required revision as the associated environmental research has revealed the dense network of Ouse floodplain palaeochannels and islands, evincing that there wasn't one river in prehistory but many. Strict methodological consistency across both of its banks and mid-stream islands has, nonetheless, been held to be paramount. The latter entails uniform, buried soil prospection-cover sampling as part of the initial landscape evaluation programme: 90 litre samples on a 100m grid throughout, locally reducing down to 50m and 25m intervals (regularly reinforced by judgementally sited 'grabs'; see Evans & Knight 2000: fig. 9.4). Densities of four to five flints per sample are taken to indicate 'sites'. In contrast, where specific sites are under investigation, differing approaches have been applied to the sampling of these horizons. That has generally involved standard metre-square units—in various grid or transect configurations (see e.g. Garrow 2006: fig. 6.29). It has been augmented, however, by diverse surface-collection techniques, such as

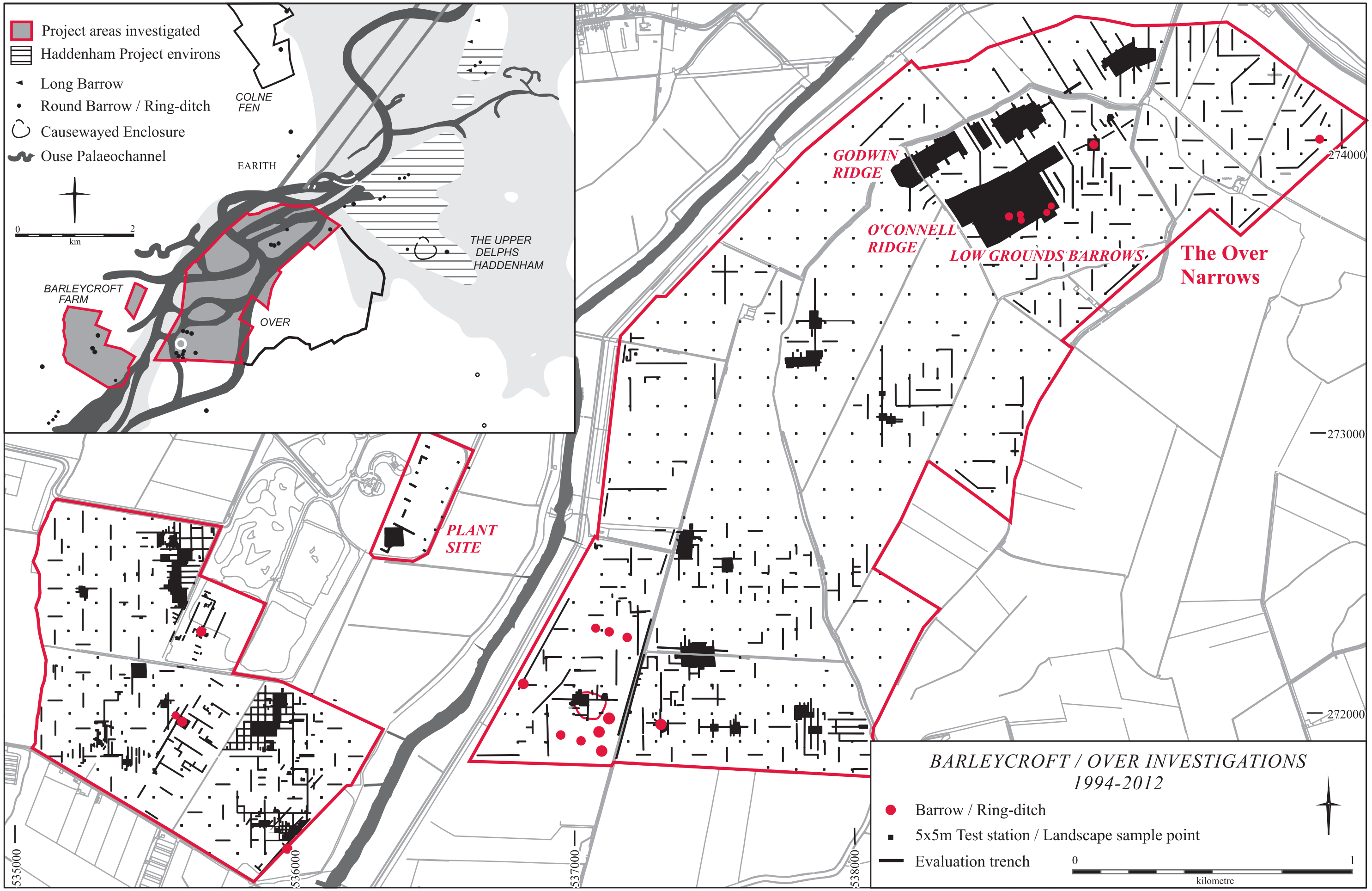

Figure 1. Investigations at Barleycroft Farm and Over: location of trenches, sites and barrows (burial mounds).

wind-deflation weathering and even the commissioned ploughing of the buried soil (see Evans *et al.* 1999: fig. 2).

Only the broadest summary of the area's sequence can here be offered. Before the Middle Bronze Age, the main horizons of activity on the riverside terraces and islands occurred during the Mesolithic and later Neolithic. The latter is represented by a series of pit cluster sites associated with Grooved Ware (*c.* 2900–2300 cal BC), two of them accompanied by shed-like buildings (see Garrow 2006: ch. 6). This is not to say that the area did not see earlier Neolithic activity. Indeed, in addition to scattered finds, in 1996 a major 27-pit complex with Mildenhall Ware was excavated on the Barleycroft side (*c.* 3700–3500 cal BC; see Evans *et al.* 1999; Evans & Hodder 2006a: 236, fig. 4.16; Garrow 2006: 27, fig. 4.5).

Thus far, Middle Bronze Age fieldsystems have been found to extend across both the western terraces and the main mid-stream islands (Evans & Knight 2001; Yates 2007: 95–96, fig. 10.6). Contemporary settlement has been recovered at two locales, one of them within a large earlier Bronze Age enclosure in the south on the eastern Over side. It stands upon a major island amid the preserved and officially protected southern Over round barrow cemetery (Figure 1). Two of the outliers—one a large ovoid-plan pond barrow—have been investigated within the course of the project. These mid-stream, 'islanded' barrow cemeteries are of Early Bronze Age date (*c.* 2000–1600 cal BC) but only one such monument has been identified upon the western riverside, at least within the quarry-zone area. The western terraces were, instead, dotted by more modestly mounded ring-ditch settings. At least one has been demonstrated to have earlier Bronze Age origins, but these are essentially Middle Bronze Age (*c.* 1600–1200 cal BC) and one was connected with a major cremation cemetery with burials in Deverel Rimbury urns. Interestingly, while lying at a major 'seam' within the fieldsystem, it lay at a remove from contemporary settlement (Evans & Knight 2000). In some contrast to adjacent parts of the fen-edge where Iron Age densities are high, there has been relatively little evidence of Iron Age settlement (though see below for Barleycroft Plant Site and Godwin Ridge).

The Godwin Ridge—depositional icebergs

The Godwin Ridge is located within the northern *Over Narrows* portion of the quarry—so-named for the river-race character of its palaeochannel carved through and flanked by parallel sand and gravel ridges. The investigation in 2008 involved the near-totality of the ridge, which measures 575m in length (5.4ha; Figures 1 & 2). The work resonates with other marshland-ridge excavations, such as Hazendonk in the Rhine/Meuse delta (Louwe Kooijmans 1974) or, nearer at hand, Peacock's Farm/Shippea Hill in the Cambridgeshire fens (Clark *et al.* 1935; we named our ridge after that site's environmentalist, Harry Godwin). Yet the latter were relatively small, test-scale exercises, and the total excavation of a discretely bounded palaeo-topographical entity—such as the whole of the Godwin Ridge rising 1–3m above its surrounding river channel—is a rare thing in archaeology.

Spanning the period from the Mesolithic to the Iron Age, the extraordinary occupation sequence on the Godwin Ridge has been outlined elsewhere (e.g. Evans & Vander Linden 2008; Evans 2012; Evans *et al.* forthcoming). There were major Mesolithic flint scatters at both ends, but before the enclosures of the Middle Bronze Age the cut-feature traces were

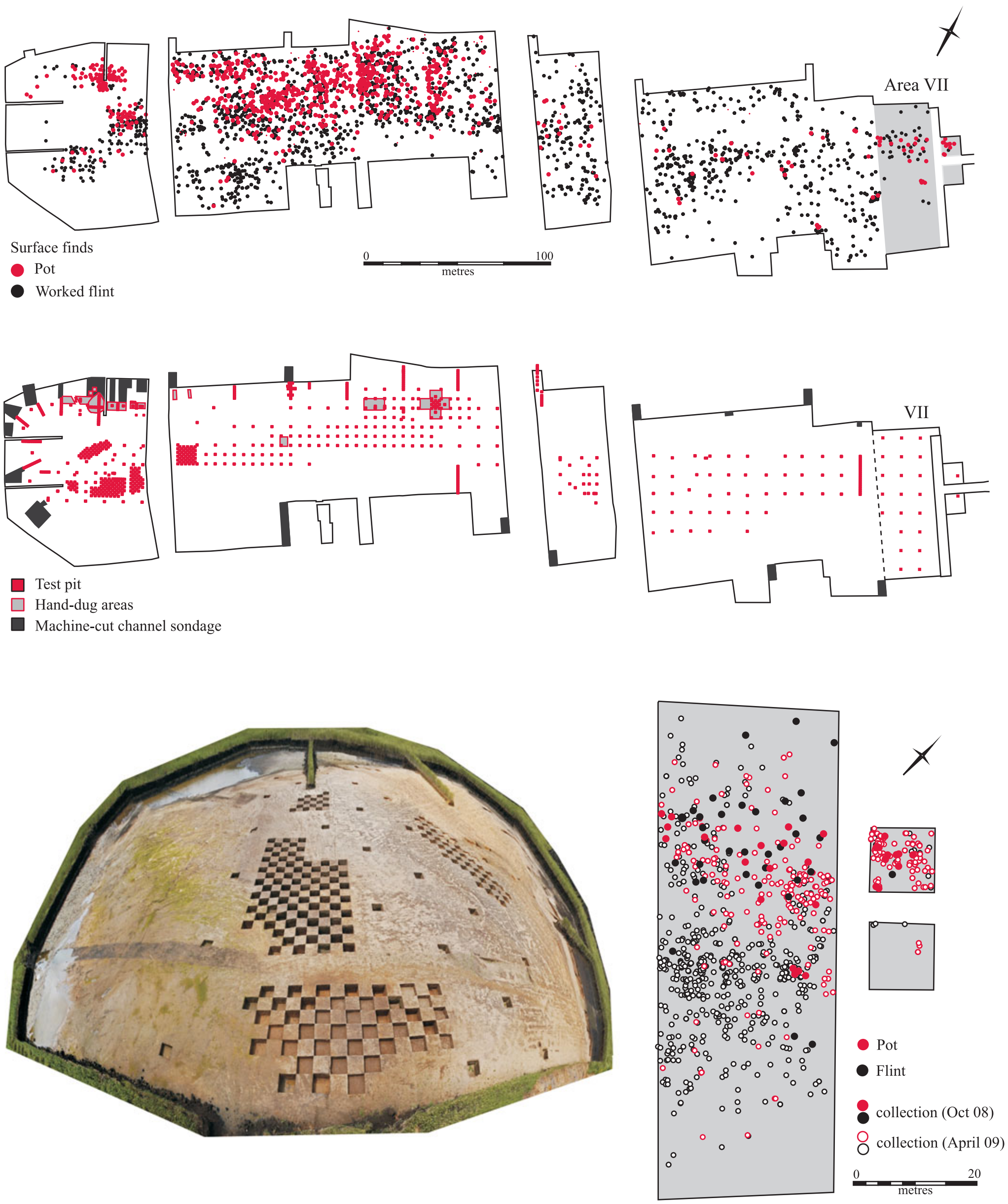

Figure 2. The Godwin Ridge, with (above) distribution of surface finds and location of test pit sampling; (below) the buried soil sampling grid at the western end of the ridge (left) and plot showing successive surface finds from Area VII (right).

relatively modest: various scatters and clusters of pits, some accompanied by roundhouses and other posthole settings. Remarkably in such an isolated locale, evidence was found of early spade cultivation plots (possibly Beaker-related) and later prehistoric horticultural activity.

Most significant of the methodologies applied during the investigation of the ridge was the intense sampling of its buried soil, which was generally 0.2–0.5m deep. Some 700 metre-square test pits were hand-dug (Figure 2), and in total more than 70 000 artefacts were recovered, leading to an estimate of total numbers of finds in excess of one million. This surface-sampling allowed for unique nuancing of the ridge's sequence, particularly the fact that, of the 35 sites or occupation events identified, fewer than half left sub-surface traces and only registered as horizontal finds-spreads (Figure 3).

The implications of this cannot be over-emphasised. We are by now accustomed to the idea that traces of most Mesolithic and much Neolithic occupation or activity only occur as surface-spreads, but the same is not true of later periods. While all periods had their representative 'cut-feature sites', it was surprising that there were also separate Middle/Later Bronze Age, as well as Iron Age, spreads with few or no corresponding features. Indeed, the discovery that the fairly modest Late Bronze Age occupation (five roundhouses and some tens of pits) was accompanied by substantial middens—extending over 5800m^2 and which, by appropriate factoring of the test pit densities, must have involved some 85 000 sherds—was entirely due to the sampling programme. This is also the case of the Iron Age ritual complex at the western end of the ridge. Here the majority of the votive 'packages' and human bone (predominantly skulls, but with cut-marked long bones attesting to dismemberment) were only recovered by the metre-square excavation of the buried soil strata.

Situated mid-stream, by no means can the Godwin Ridge be considered a typical site locale. It would have been a niche environment, seeing both episodes of permanent occupation and more frequent procurement visits, as well as occasional larger social gatherings. Certainly, it would not have been a place of long-term settlement continuity. Accordingly, with some justification the argument could be mounted that the ridge's sequence represents a 'special case' and that its surface densities were much greater than those normally encountered. In riposte, we may take a landscape with more typical finds densities such as at Fengate (e.g. Pryor 1984; Evans *et al.* 2009). There finds levels in the buried soil are lower with average densities of 0.5–1 worked flints per metre-square (i.e. *c.* 5000–10 000 flints per hectare; cf. Godwin Ridge, 18.4 sieved/9 non-sieved per metre flint densities). Excavating by normative techniques, a hectare at Fengate—exposing its renowned fieldsystem and various Neolithic and Bronze Age pit clusters—would rarely achieve a flint assemblage of much more than 500 pieces. The crucial point is that by ignoring even its low-density buried soil material, one would be trying to interpret its sequence from only 5–10 per cent of the total lithic assemblage. This percentage is obviously dependent upon the sampling strategy applied to the excavation of cut features, but represents the current standard. At the Godwin Ridge, 6.7 per cent of the flint occurred within features and much of that in residual contexts.

The massive data-sets from the Godwin Ridge reflect upon a multitude of 'headline' themes, among which are the uptake of wild resources (and only their rare ritual deployment) and the impact of local marine inundations. Equally, they offer major insights into changes within long-term occupation practices, particularly the varying frequency of surface finds *versus* cut-feature deposits. What is singularly striking is how little later Neolithic Grooved Ware pottery occurred in surface contexts—'they' clearly cleaned up and backfilled their surface residues into features more than in any other period (Table 1) and, also, the prominence of the Late Bronze Age buried soil assemblage as a result of its midden deposits.

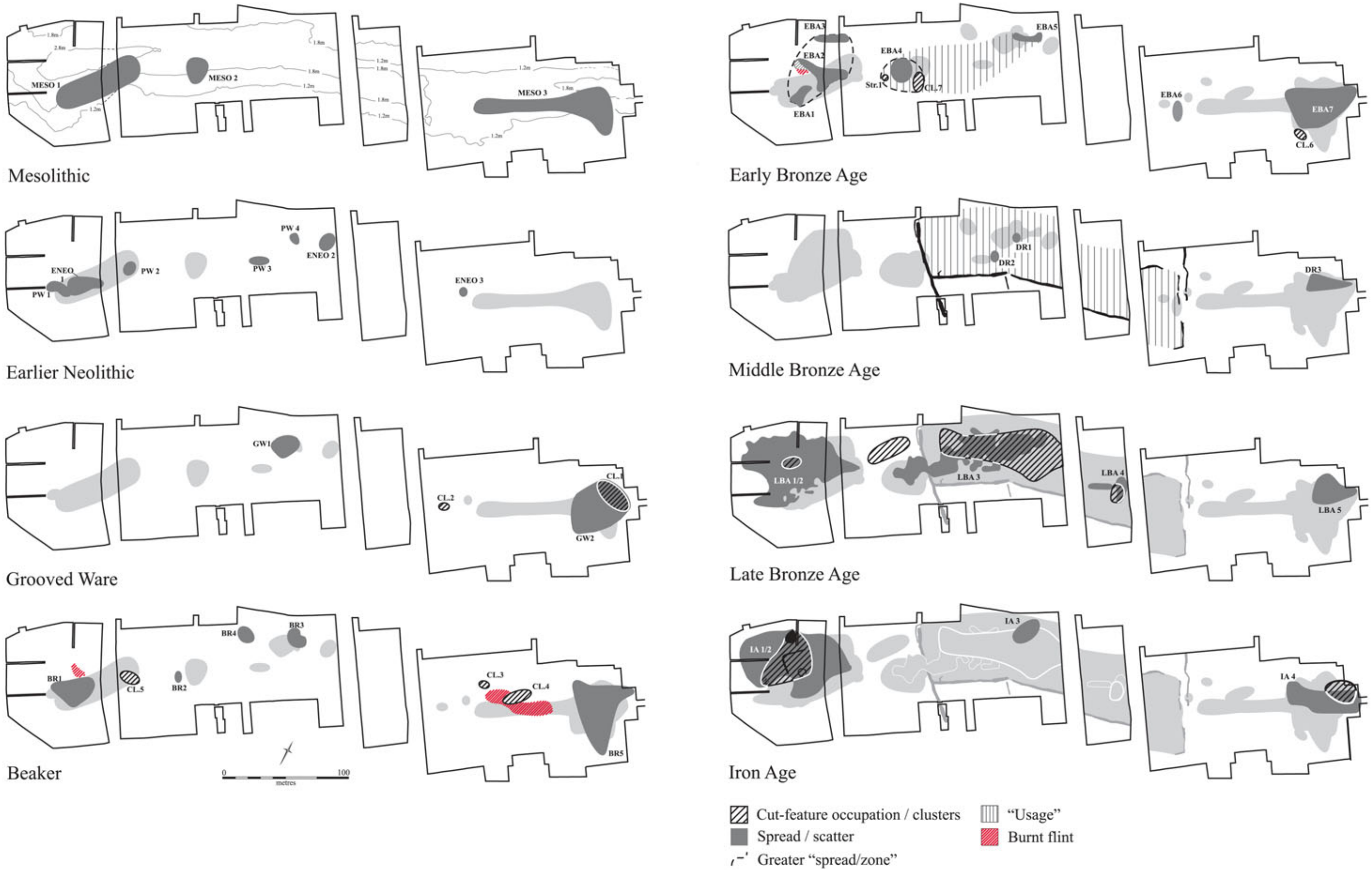

Figure 3. The Godwin Ridge sequence showing distribution of artefact spreads and feature-based occupations.

Table 1. The Godwin Ridge: percentages of pottery recovered from features and buried soil (with number of sherds in brackets below) and as a proportion of the total site pottery assemblage. Note that the majority of the Early Bronze Age pottery must essentially represent undiagnostic Collared Urn; when the two are combined they account for 4.5% of the total site assemblage, with 28.6% deriving from surface contexts.

Pottery type	Feature%	Buried soil%	Assemblage total%
Early Neolithic	57.9	42.1	0.5
(3500–2900 BC)	(33)	(24)	(57)
Peterborough Ware	21.4	78.6	0.5
(3500–2500 BC)	(12)	(44)	(56)
Grooved Ware	96.7	3.3	1.7
(*c.* 2900–2300 BC)	(175)	(6)	(181)
Beaker	84.3	15.7	5.4
(*c.* 2500–1700 BC)	(473)	(88)	(561)
Food Vessel	33.3	66.6	0.03
(*c.* 2400–1600 BC)	(1)	(2)	(3)
Collared Urn	87.2	12.8	3.0
(2200–1400 BC)	(272)	(40)	(312)
Early Bronze Age	39.4	60.6	1.5
(2000–1600 BC)	(63)	(97)	(160)
Deverel Rimbury	41	58.9	0.4
(1600–1100 BC)	(16)	(23)	(39)
Late Bronze Age	13.1	86.9	59.4
(*c.* 1100–600 BC)	(806)	(5347)	(6153)
Later Iron Age	41.4	58.6	27.4
(100 BC–AD 100)	(1176)	(1667)	(2843)

We will conclude this section by outlining an experimental procedure. This is appropriate as it is held that *experimentation*, which should be a key tenet of all fieldwork (i.e. teasing out 'more'), is something sadly neglected in most developer-funded projects. That said, an admission is warranted as these quarry sites host Cambridge University's annual student training dig, and this provides the scope for many of the project's 'extras'. In 2009 we returned with the students to finish work on one of the intervening areas (no. VII: 2370m^2; Figure 2). Anticipating this, given the sandy character of its buried soils, and knowing the ferocity of winter Fenland winds, the overburden had been stripped the previous autumn, leaving the exposed surface to deflate for six months. We started the programme by fieldwalking, each plotted find having been left wind-pedestalled to a height of 10–20mm. Some 1800 artefacts were retrieved. The area was then test pit-sampled before stripping the soils down to the underlying geology. Although the cut-feature archaeology did not prove in any way spectacular—a handful of pits and various post settings—interweaving the various data-collection tiers allowed for unique detailing of the individual period-register of its overlapping spreads (Figure 4).

Two years later, the same techniques were applied when the next ridge-length to the north was excavated, and we were once more able to distinguish a palimpsest of surface 'sites'. Indeed, by the time the analyses had been completed we were left almost disheartened. In the face of just so much 'surface activity' it was clear that if these levels were left to weather for

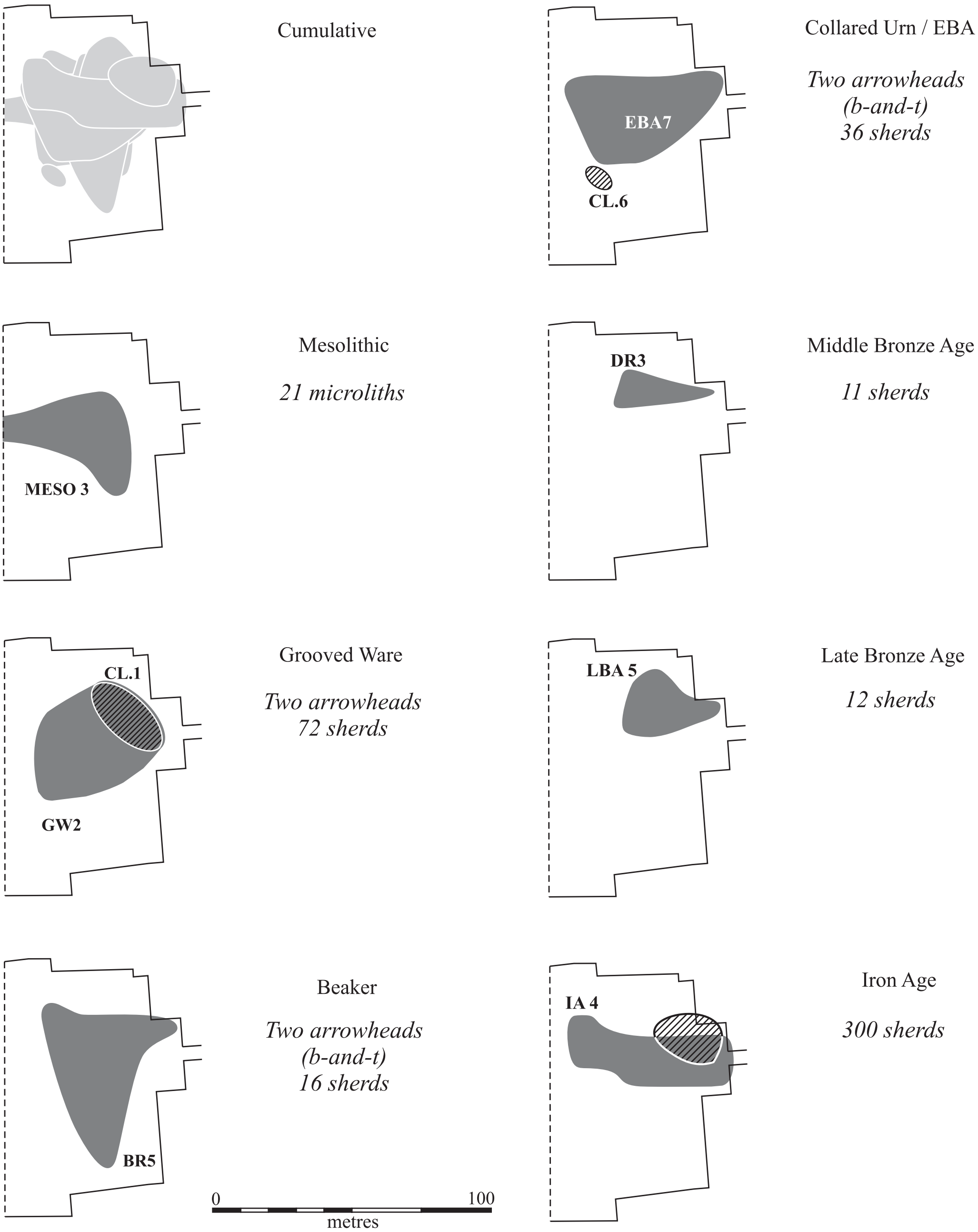

Figure 4. The Godwin Ridge, showing individual period components of both surface spreads and feature-based sites at the eastern end of the ridge (Area VII). Hachures indicate clusters of contemporary features. b-and-t=barbed and tanged.

further successive periods and then fieldwalked again, other distributional patterns would surely be evident. No matter how sophisticated our methodologies, such sampling is only allowing us to glimpse what are, in effect, the tips of long-term *depositional icebergs*. Trying to identify individual surface-sites amid so much material is akin to naming constellations within the myriad night-time stars. This, of course, is why one samples in the first place—for the limited and measurable retrieval of otherwise over-abundant data—but we must not for a moment be fooled into thinking that the resulting delineations are absolutes.

The Low Grounds barrow cemetery—dead count

Pitifully few prehistoric barrows have been investigated in Britain by modern techniques. As a result, the widespread excavation of plough-reduced 'ring-ditch' forms have come to dominate understanding of their interred populations and construction sequences, prompting an over-emphasis of pre-mound 'open' phases (e.g. Garwood 2007; Last 2007; see also Healy & Harding 2007). As part of the Over Narrows programme we excavated three round barrows (one overlying a Beaker flat cemetery), plus two associated pond barrows. These were sited upon the O'Connell Ridge and the aptly named Low Grounds Terrace island, immediately south of the Godwin Ridge, separated from each other by a major palaeochannel (Figures 1 & 5). The mounds of the main upstanding monuments, built of turf/soil and without surrounding ditches (i.e. not gravel-capped), stood over a metre high. Altogether 41 cremation burials were recovered (some multiple, adult-plus-infant/-immature interments), of which 21 were associated with Collared Urns.

The cremations were not regularly distributed among the monuments. The two western turf barrows—numbers 12 and 13—respectively had six and five, whereas the westernmost (no. 15) had far more: 19 in total. That distinction was shared with its associated pond barrow (no. 16), which had nine cremations as opposed to only two within the pond barrow (no. 14) north of Barrow 13. The much greater number of burials at Barrow 15 was clearly related to its extraordinary primary-phase form (Figure 5). It was reminiscent of Wessex disc barrows and hengi-form-like, with an upstanding bank encircling a small central mound sealing a cremation. In contrast to the seemingly family scale of burial at the other turf barrows, it arguably had a different function and drew upon a much wider community.

There is unfortunately not the scope here to discuss the range of the cremation rites and their social implications (marrying-in, etc.), nor the details of the mound-phase construction sequences. For our immediate purposes, two points simply need to be made. First, the barrows were unditched, and few of their interments (only two) penetrated down into the natural gravel. Had they been ploughed-out, only minimal traces would have been left. The Beaker inhumations would have been recovered, but only a very skilled excavator would be able to recognise that there had been a barrow cemetery at all. The second point relates to the number of cremations per barrow. Ignoring the very high number of burials from Barrow 15 on the grounds that it was a distinct form, the five and six burials within the other turf barrows are still substantially more than those usually recovered from the many ploughed-out barrows that have been excavated. On this hinges a great deal. The number of individuals thought necessary to construct a barrow (it often being argued that they could only have been assembled seasonally), and the low average number of interments from the investigations of non-mounded sites, has promoted models of elite/chieftain burial in which only a very minor portion of the populace ever received barrow interment (e.g. Atkinson 1972; Green 1974). The Low Grounds results would challenge this. Not

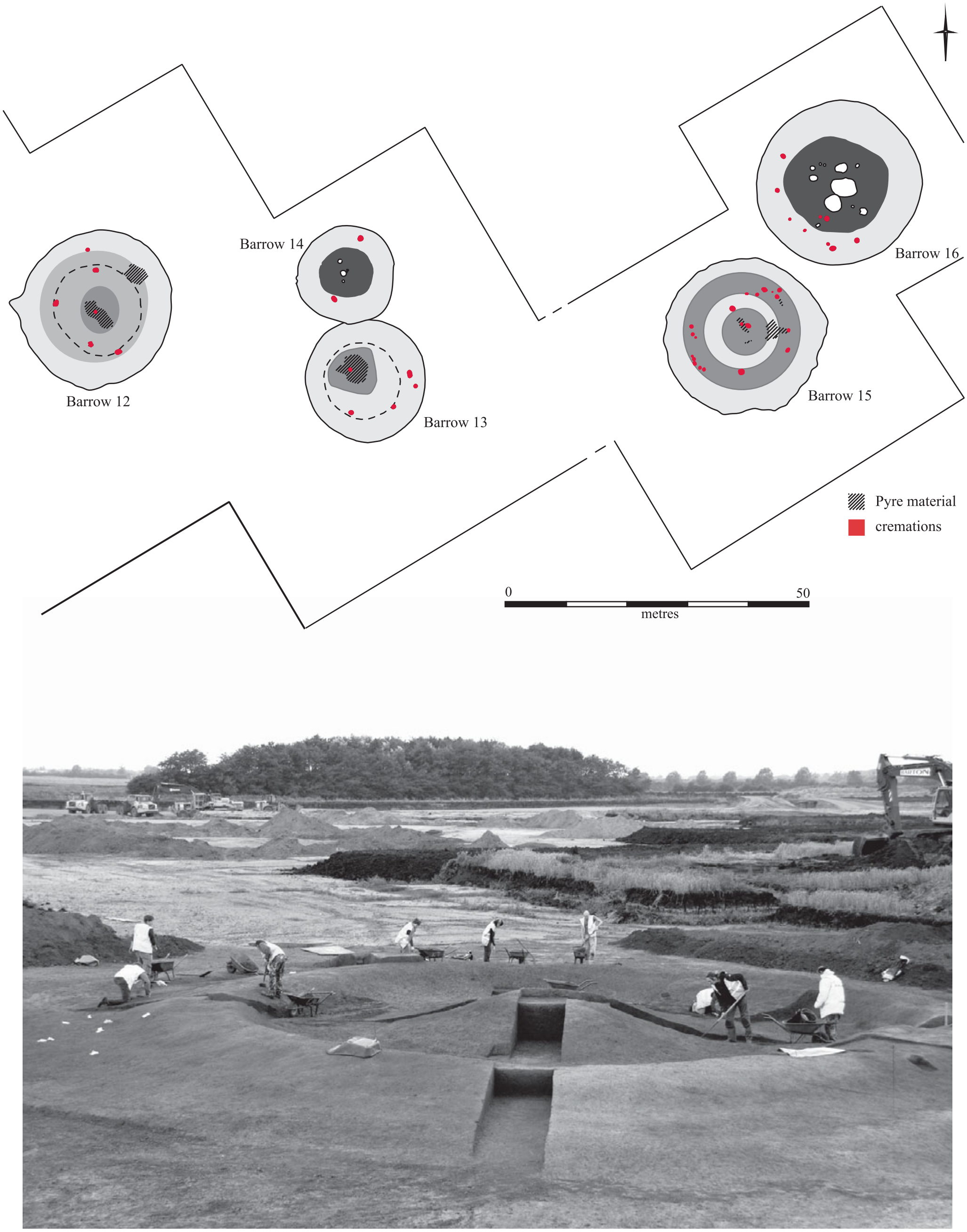

Figure 5. The Low Grounds Barrows: plan of the complex (above) with photograph of excavation at Barrow 15 (below).

only were greater numbers evidently receiving such burial, but the investigations both there and in the project's other barrow excavations demonstrate that most barrows began as minor, 'immediate-on-death' mounds (comparable to Barrow 15's primary bank-encircled mound). These were of cairn-like proportions, some 4m across, and could have been readily constructed by a limited number of participants and only were later sequentially expanded. In short, there is now no reason to see all barrow construction as mass-group activity requiring the 'social pull' of chieftains.

The Barleycroft Plant Site—house counts

The third case-study concerns what can only be considered a fairly standard, sub-square Middle/Later Iron Age enclosure covering an area of 0.45ha. The conditions of its excavation in 2012 were both dramatic and somewhat absurd. The site had been discovered through evaluation trenching in the mid 1990s and then left *in situ* within the confines of the quarry's processing plant (Figures 1 & 6). Its excavation, 17 years later, only arose through the company's need to store additional mineral.

Sealed beneath alluvium and with waterlogged ditch fills, the site proved very well preserved. Stripping of the overlying clays exposed the ditch of the compound, with its associated upcast banks (Figure 7). Surprisingly enough, although Roman ditches and a small animal paddock were apparent at this level, no Iron Age features could be distinguished within the uniformly black-stained, 'dark earth-like' buried soil across its interior, nor were there any discrete strata (floors, etc.). This horizon was then metre-square sampled to appraise its finds densities, as well as to determine at what level features registered within its matrix. It was then machined down to approximately the middle-depth of its profile, at which point all visible features were excavated. This process was repeated when the lower buried soil was removed down to the geological gravels, with the further features then exposed being investigated.

Pottery and animal bone occurred, respectively, in ranges of 0–19 (average 3.8) and 0–40 (average 6.5) sherds/pieces per metre. These finds densities were not particularly high, especially when compared to the nearby HAD V compound (Evans & Hodder 2006b: 146–47, 150–51, 286–87). Nevertheless, this multi-stage technique ensured that traces of far more structures were recovered than would be normally. Leaving aside a few Neolithic and earlier Bronze Age pits, as well as the boundaries of the wider Middle Bronze Age fieldsystem, there were 18 roundhouses. Some were very slight and a number were only apparent within the upper or middle soil profile. At HAD V a range of similarly small, relatively insubstantial ancillary structures were recovered through the hand-excavation of the soil horizons in the interior of that compound. Unfortunately, such non-robust remains are clearly being lost through the 'hard' machining employed in many of today's mass-strippings.

Eighteen may seem an unusually high number of roundhouses to recover from such a limited area, when normally only five to eight might have been anticipated. Given that the samples of charred plant remains were particularly rich in cereal deposits, and that arable activity of that date registered highly within an adjacent palaeochannel pollen core (8.8 per cent), it could be argued that this riverside locale was another 'special' instance. Yet its building count would only represent one structure for every *c*. 19.5 years of the Iron Age settlement's 350-year duration. Alternatively, assuming that two such buildings would have been contemporary and that they had functional life-spans of upwards of 30 years, then theoretically some 23 roundhouses should have been present: around 22 per cent more than were actually distinguished. Reality does usually of course fall short of ideal propositions;

Figure 6. The Plant Site: (above) looking east across the settlement with the remnant earthwork visible; (below) looking west through the entrances of Structures 8 & 9 (Phase IV; see Figure 7, bottom left).

the point to stress here is that only through the application of special buried soil techniques do we start to recover numbers that might come anywhere close to filling the timespans of our archaeological sequences.

Partial pasts

Be it the tally of site-occupations, the barrow interments or the number of a settlement's roundhouses, each of these case-studies basically tells the same story: appropriate sampling of buried soil reveals that there simply was a lot more of the past than normative excavation techniques reveal. Accordingly, we must conclude that we usually only write highly *partial*

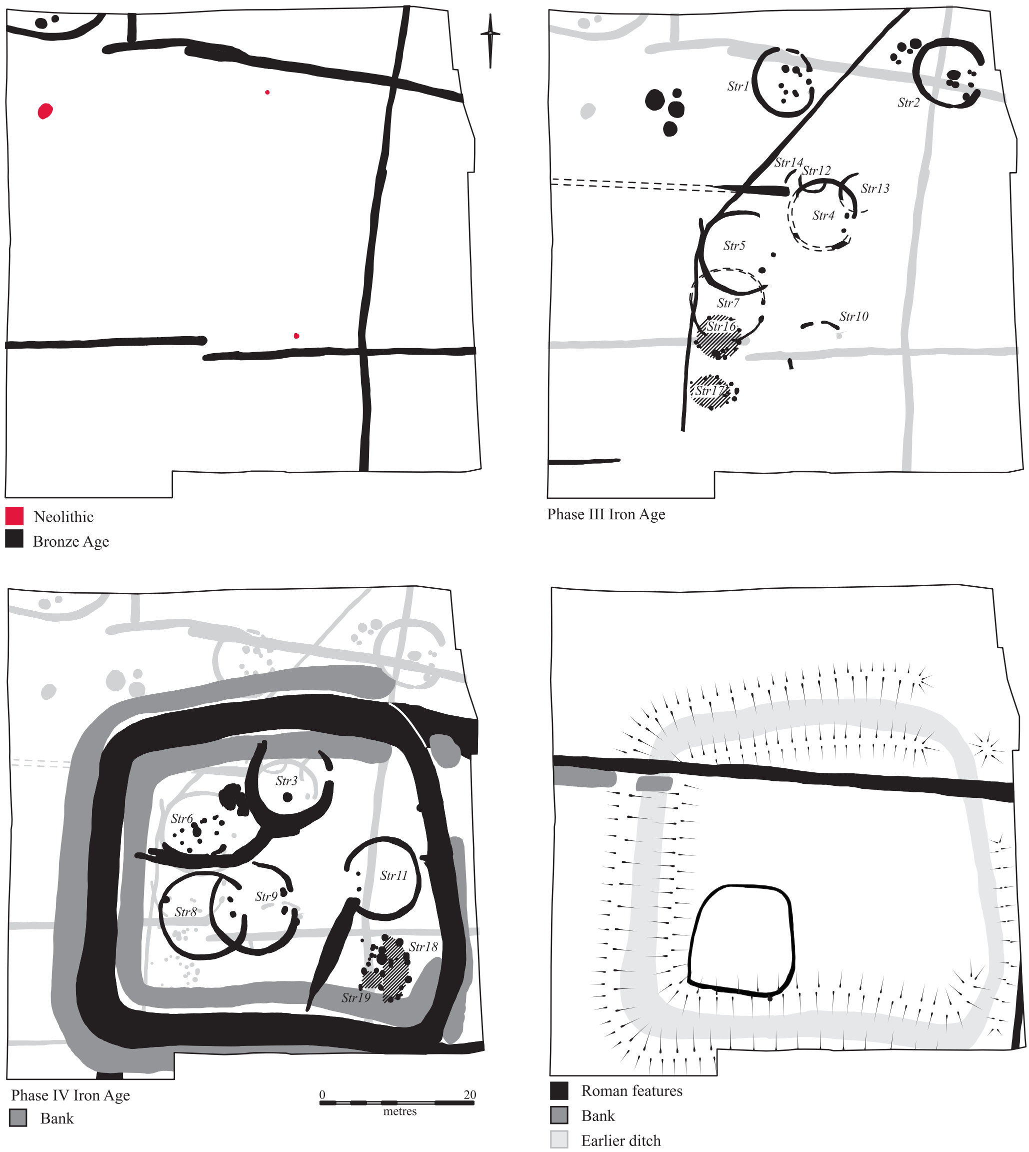

Figure 7. The Plant Site: occupation sequence.

pasts that do little justice to time and the cumulative residues of so many lives lived on the land. In this perspective, among the many advantages of buried soil data is that it often introduces a degree of chaos and undermines overly 'comfortable' simple site narratives.

Such exercises as presented here invariably end up serving as cautionary tales. Yet the key point is not so much that all sites should be approached in the manner of Barleycroft/Over and that their covering soil horizons need always be interrogated in such intensity. It is, rather, that interpretation must acknowledge the degree of machining-technique data loss when calculating site and landscape totals. This awareness is further compounded by the fact that the large-scale evaluation programmes and excavations in south-eastern England over the last two decades have shown much higher settlement densities than previously thought possible (Evans 2000b, 2012; Evans *et al.* 2008: ch. 3). By such means it is now known that over large tracts, contemporary later prehistoric or Roman settlements were only around 300–500m apart. This has enormous implications; they could have effectively waved to their neighbours, meaning that there is no longer any need to evoke mechanisms like pastoral transhumance or wandering smiths or potters to explain the widespread transmission of material cultural traits and social practices.

With few exceptions (Clarke 1972; Hodder & Orton 1976; Groube 1981), British archaeology has shied away from the application of analytical approaches to issues of past settlement densities and populations (see Steele & Shennan 2009 and Zimmermann *et al.* 2009 for recent developments in palaeo-demography). Now, with the wealth of new landscape data, and the knowledge of the potential 'depth' and intensity of site sequences, comes *the challenge of numbers* (Evans 2012). Faced with the recognition of there being just 'so much past', our interpretive frameworks can seem woefully out-moded and often, arguably, far too precious.

Acknowledgements

This paper has benefited from the attention and comments of Grahame Appleby, Marcus Brittain, Charly French, Frances Healy and Chris Scarre. More generally, over the decades of the Barleycroft/Over Project we have been grateful for input and support from many, particularly Richard Bradley, Steve Boreham, Mark Edmonds, Duncan Garrow, Kasia Gdaniec, Ian Hodder, Jonathan Last, Mark Knight, Josh Pollard, Niall Sharples and Marie Louise Stig Sørensen. That said, foremost in this listing should be Brian Chapman and Hilton Law (and colleagues) at Hanson Aggregates for their inspired co-operation throughout. While the company has provided the bulk of the fieldwork's funding, additional resourcing for the *Over Narrows* excavations was forthcoming from the Aggregates Levy Sustainability Fund/English Heritage.

The graphics herein reflect the skills of Andrew Hall, with the photography by Dave Webb (both Cambridge Archaeological Unit).

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Received: 14 February 2013; Accepted: 18 March 2013; Revised: 22 April 2013