



McDONALD INSTITUTE MONOGRAPHS

Pattern and Process

Landscape prehistories from Whittlesey Brick Pits:
the King's Dyke & Bradley Fen excavations 1998–2004

Mark Knight and Matt Brudenell



CAU Must Farm/Flag Fen Basin *Depth & Time Series* — Volume I

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Brick Pits: the King's Dyke & Bradley Fen
excavations 1998–2004

By Mark Knight and Matt Brudenell

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Published by:

McDonald Institute for Archaeological Research
University of Cambridge
Downing Street
Cambridge, UK
CB2 3ER
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McDonald Institute for Archaeological Research, 2020

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ISBN: 978-1-902937-97-7

Cover design by Dora Kemp, Andrew Hall and Ben Plumridge.
Typesetting and layout by Ben Plumridge.

On the cover: *Bradley Fen 2001 (excavating the watering hole F.866).*

Edited for the Institute by James Barrett (*Series Editor*).

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Acknowledgements

The brick pit was fundamental. Its very existence determined our presence while its proceeds funded our work. As ever, we are indebted to Forterra Building Products Ltd (formerly Hanson UK) for the opportunity to research such exciting spaces. In particular, we would like to thank Andy Corley, Rob Donnelly, Ian Willis and, more recently, Tim Darling, Dominic Delich and Brian Chapman for their enthusiastic assistance in our investigations of the brick works of Whittlesey. Concerning the planning or development control component of the investigations, Simon Kaner, Andy Thomas and Kasia Gdaniec of Cambridgeshire County Council's Historic Environment Team are to be thanked for their attention to detail, support and continued far-sightedness. The archaeology presented within this volume benefitted especially from the ingenuity and practicality of Simon Collcutt of Oxford Archaeological Associates (consultant for Bradley Fen) together with the managerial adeptness and great patience of David Gibson (Cambridge Archaeological Unit). As Project Manager, David Gibson should also be acknowledged for the unenviable task of having to be enthusiast and realist all at once. We believe Bradley Fen represents a fine demonstration of the vital negotiation between developers, planners and archaeologists.

Charly French, Paul Middleton, Francis Pryor, Rob Scaife and Maisie Taylor were frequent visitors, bringing experience and encouragement in equal measure. Their generosity of ideas contributed greatly to the understandings presented here — all excavations should be afforded such wise counsel. In similar vein, conversations with Jo Brück, Christopher Evans, Kasia Gdaniec, David Gibson, David Hall, JD Hill, Gavin Lucas, Lesley McFadyen, Richard Mortimer, Stuart Needham, Roderick Regan and Ben Robinson kept us on our interpretive toes. That we had found a site worth explicating was made appar-

ent by the number of requests to publish its plan (Richard Bradley, Mike Parker Pearson and David Yates) or to analyse its artefactual or environmental assemblages. Material gleaned from King's Dyke and Bradley Fen furnished parts of more than one PhD (Matthew Brudenell and Rob Law) along with several MPhil and undergraduate dissertations (Grahame Appleby, Manuel Arroyo-Kalin, Emma Beadsmoore, Tracey Pierre and Sean Taylor). We are grateful to those who expressed an interest and helped put our work into a much wider context.

An opportunity to think and read was extended to Mark Knight by the McDonald Institute for Archaeological Research. During time as Field Archaeologist in Residence in 2011 he was allowed to combine a bit of *field* with a bit of *theory*. This volume, or at least a large chunk of its theoretical input and product, represents an outcome of that time well appreciated and hopefully well spent. The main body of this text was completed in 2013, and was revised following comment in 2015 and 2018.

Finds were processed by Norma Challands, Jason Hawkes, Leonie Hicks, Gwladys Monteil and Sharon Webb. The graphics in this volume were produced by Andrew Hall with the assistance of Marcus Abbot, Michael Court, Vicki Herring, Donald Horne, Iain Forbes and Jane Matthews. Chloe Watson drew the log ladder and mallet. Studio photography was undertaken by Dave Webb, while onsite photography was undertaken by members of the excavation team. The text was edited by Iona Robinson Zeki, who tackled style in tandem with content, her interventions being astute as well as necessary.

Special thanks are extended to Mark Edmonds and Francis Healy for reading (so thoroughly) and commenting (so cogently) on this monograph. In line with a major theme of this book, we gained from their depth. We also accept that we still have a great deal to learn about radiocarbon dating, especially if we

want to employ it as a sensitive instrument. The monograph was proofread and indexed by Vicki Harley.

The monograph describes the core prehistoric archaeology of King's Dyke and Bradley Fen and is an expression of many peoples hard work in the field as well as in the library, lab and office. The excavation teams were as follows:

King's Dyke 1998: Marc Berger, Craig Cessford, Duncan Garrow, Cassian Hall & Mark Knight.

King's Dyke 1999: Marcus Abbott, Joe Abrams, Mary Alexander, Nicholas Armour, Rachel Ballantyne, Emma Beadsmoore, Andy Clarke, Anwen Cooper, Bob Davis, Duncan Garrow, Andrew Hall, Dave Hall, Jon Hall, Candy Hatherley, Mark Knight, Lesley McFadyen, Richard Mortimer, Ricky Patten, Martin Redding & Beccy Scott.

Bradley Fen 2001: Marcus Abbott, Rachel Ballantyne, Emma Beadsmoore, David Beresford-Jones, David Brown, Matthew Brudenell, Simon Burney, Craig Cessford, Norma Challands, Philip Church, Andy Clarke, Jason Clarke, Chantal Conneller, Bob Davis, Paul Donohue, Natasha Dodwell, Andy Fergerson, Duncan Garrow, Susanne Hakenbeck, Andrew Hall, Candy Hatherley, Teresa Hawtin, Charlie Kitchin, Mark Knight, Mary Leighton, Jane Matthews, Lesley McFadyen, Mary Nugent, Ricky Patten, Richard Purves, Martin Redding, Neil Redfern, Christina Robinson, Beccy Scott, Mark Spalding, Fraser Sturt, Richard Turnbull, Roland Wessling, Steven Williams & Felicity Woor.

Bradley Fen 2004: Ben Bishop, Emma Beadsmoore, Grahame Appleby, Matthew Collins, Donald Horne, Mark Knight, Iain Morley, Martin Oakes, Laura Preston, Tim Vickers, Ellen Simmons, Chris Swaysland & Steven Williams.

Being in the field at King's Dyke and Bradley Fen was a process of sustaining a close engagement with context and circumstance. Much of the time we did this surrounded by the roar, exhausts and dust of heavy plant as it uncovered the ground in front of us or removed the ground behind us. The process was fairly rapid and there was a sense of things being done at a pace. Throughout, however, we tried to stay contextual and we achieved this largely by talking through our individual features, putting into words *cuts*, *fills*, *layers* and *finds*. Friday afternoons (invariably after chips) frequently involved walking around the site discussing each other's postholes, pits, ditches and deposits. In this manner, we were able to articulate and correlate different features and begin to recompose sites and landscapes. These grounded conversations occurred at the top of the contour, at King's Dyke, and continued all the way to the bottom of the contour, at Bradley Fen. As we moved down, the depth and complexity of sediment increased and our postholes, pits, ditches and deposits became progressively better preserved. In these sunken spaces, upcast banks and mounds endured. Buried soil, silt and peat horizons intervened between things. All of these details amplified our comprehension or, what we called at the time, our 'confidence in context' – in this we came to be immersed.

Summary

The King's Dyke (1995–1999) and Bradley Fen (2000–2004) excavations occurred within the brick pits of the Fenland town of Whittlesey, Cambridgeshire. The investigations straddled the south-eastern contours of the Flag Fen Basin, a small peat-filled embayment located between the East-Midland city of Peterborough and the western limits of the 'island' of Whittlesey. Renowned principally for its Bronze Age and Iron Age discoveries at sites such as Fengate and Flag Fen, the Flag Fen Basin also marked the point where the prehistoric River Nene debouched into the greater Fenland Basin.

In keeping with the earlier findings, the core archaeology of King's Dyke and Bradley Fen was also Bronze Age and Iron Age. A henge, two round barrows, an early fieldsystem, bronze metalwork deposition and patterns of sustained settlement along with metalworking evidence helped produce a plan similar in its configuration to that first revealed at Fengate. In addition, unambiguous evidence of earlier second millennium BC settlement was identified together with large watering holes and the first burnt stone mounds to be found along Fenland's western edge.

The early fieldsystem, defined by linear ditches and banks, was constructed within a landscape pre-configured with monuments and burnt mounds. Genuine settlement structures included three of Early Bronze Age date, one Late Bronze Age, ten Early Iron Age and three Middle Iron Age. Despite the existence of Middle Bronze Age wells, bone dumps and domestic pottery assemblages no contemporary structures were recognised. Later Bronze Age metalwork, including single spears and a weapon hoard, was deposited in indirect association with the earlier land divisions and consistently within ground that was becoming increasingly wet. By the early Middle Iron Age, much of the fieldsystem had been subsumed beneath peat whilst, above the peat, settlement features transgressed its still visible boundaries.

Combined, the King's Dyke and Bradley Fen excavations established a near continuous transect across the Flag Fen Basin's south-eastern gradient – the former exposing its very top, the latter its top, middle and base. The different elevations yielded different archaeologies and in doing so revealed a subtle correspondence between altitude and age. The summit of the gradient contained Roman as well as prehistoric features, whereas the mid-point contained nothing later than the early Middle Iron Age, and the base, nothing later than the very beginnings of the Middle Bronze Age. At the same time, there was a palpable relationship between altitude and preservation. A shallow plough soil was all that protected the most elevated parts. The very base of the gradient however, retained a buried soil as well as silt and peat horizons contemporary with prehistoric occupation and which preserved surfaces, banks and mounds that were not present higher up. The same deposits also facilitated the preservation of organic remains such as wooden barriers, log ladders and a fragment of a logboat.

The large-scale exposure of the base of the Flag Fen Basin at Bradley Fen uncovered a sub-peat or pre-basin landscape. A landscape composed of dryland settlement features related to an earlier terrestrial topography associated with the now buried floodplain of the adjacent River Nene. Above all, the revelation of sub-fen occupation helped position the Flag Fen Basin in time as well as space. It showed that the increasingly wet conditions which led to its formation as a small fen embayment transpired at the end of the Early Bronze Age. In the same way, the new found situation dissolved any sense of an all-enduring and all-defining fen-edge and instead fostered a more fluid understanding of the contemporary environmental circumstances. In this particular landscape setting wetland sediment *displaced* settlement as much as it *defined* it – the process was dynamic and ongoing.

*...simultaneity is mere appearance, surface, spectacle. Go deeper. Do not be afraid to disturb this surface,
to set its limpidity in motion. (Lefebvre & Régulier 2004, 80)*

Chapter 5

Settlement in the post-fieldsystem landscape

If the structure of this book had been dictated by a strict typological framework, then this chapter, which takes as its focus the period of the Late Bronze Age and Early Iron Age, might have begun with a description of the hoard and spear deposits at Bradley Fen. A very rigid division of things by period, however, can have its drawbacks when shaping narrative to address more specific issues, in this case the detailing of a major transformation in the visibility, permanence and patterning of settlement. That being said, the Bradley Fen metalwork has always fallen betwixt and between things, not least in terms its deposition on the wet margins of the basin. As the previous chapter has detailed, its spatial relationship to the drowned sections of the Middle Bronze Age fieldsystem are not quite as simple as they first appear. But nor is its temporal relationship to the first tangible traces of Late Bronze Age settlement on the dryland terraces. Whereas these date towards the close of the period in the ninth century BC at Bradley Fen, on chronological and typological grounds, the metalwork falls at the beginning of the Late Bronze Age. This disjuncture means we cannot directly link the visible structures associated with settlement with the deposition of the metalwork, in the same way that we cannot directly link the fieldsystems with the metalwork either. In the framework of the site narrative then, the metalwork seems to fall *between* the *floruit* of the fieldsystem and perceptible settlement horizons.

Of course, metalwork still has its place within the discussions which follow, but given the importance of the Bradley Fen finds and the detailing they required, it was thought that their inclusion here would have taken the narrative in a different direction. This is the blessing and curse of spectacular discoveries. Whilst they draw our attention and provide fertile ground for interpretation, they can simultaneously overshadow the importance of other less conspicuous trends in the material record, such as the changing character

and intensity of settlement, both at the site itself and within the context of the basin at large. This provides the focus of Chapter 5, in a setting where we begin to lose sight of the earlier landscape grain once framed by monuments and ditched boundaries.

Topographies and Environments c. 1100–350 BC

By the turn of the first millennium BC, the Flag Fen Basin was developing into a more extensive wetland embayment, whose shoreline over the next five centuries continued to migrate up the dryland terrace between 1.0 and 1.5m OD. Compared to the hydrological transformations described in the previous chapter, the consequence of this increasing saturation and pooling in the basin interior seem superficially less dramatic on the landscape window (Fig. 5.1), at least in terms of the gross area of land subsumed by the developing peat. However, the cumulative effects of this loss were still significant and potentially impacted upon established patterns of land allotment and land-use on the terrace edges.

More importantly, the threshold in the overall balance between wetland and dryland spaces in the basin window was now breached, tipping in favour of the former for the first time. As such, some of the most marked shifts in the texture of this landscape may have actually occurred *within* the wetland environments themselves. For a start, it was during the earlier part of this period that the construction and concerted maintenance of the Flag Fen post-alignment and other great timber edifices built within the basin finally came to a close. At Flag Fen, for example, the latest timbers were felled and erected around the mid tenth century BC (Neve 2001, 248). Whilst metalwork continued to be deposited along the avenue of increasingly drowned posts throughout the Iron Age, any role this structure served in providing a bridge or permanently traversable causeway across the neck of the basin was in all probability finished. Established



Figure 5.1. Flood map for the earlier first millennium BC (c. 1000 to 500 cal BC). The white line marks the edge of the wetland at the beginning of the Late Bronze Age (1.0m OD) and gives an indication of the area of land lost over the next five centuries. The most profound changes were along the gentler contours around the Northey peninsular and Thorney.

routeways and architectures which linked communities across the wetlands were gradually being lost to the rising waters. These shifts in the wetland geography would have no doubt had other impacts on the wider ecology of the basin interior, perhaps also affecting the location and procurement of familiar resources.

Arguably the most dramatic demonstration of these changes comes from the on-going investigation of the palaeochannel at Must Farm. Here, at the southern end of the Flag Fen Basin, a freshwater side-channel of the Nene had cut a course through the meandering marine silts or roddon of its forebear. Up until the beginning of the first millennium BC, this roddon was permanently perched above the adjacent, but progressively encroaching fen, providing a narrow, raised causeway into, and across, this increasingly wet landscape. Excavation of the freshwater river silts have revealed a series of fish weirs, eel traps and boats, attesting to the intensity of activity along this watercourse and its importance as a communication route.

Most spectacular, however, is the Must Farm platform site: a Late Bronze Age raised settlement located further downstream, just off the south-western shores of Whittlesey Island. The details of the site will be presented in a later volume in this series. Here, the important point to note is that the discovery

of the platform hints that there are further durable structures suitable for habitation in the wetland. Just how extensive and/or intensive such 'settlements' were within the basin wetlands remains to be seen. These finds do, however, begin to call into question the prevailing assumption that settlement progressively shifted to higher ground as the fen encroached upon the dryland terraces at the end of the second millennium BC. As opposed to inland retreat, what we may be witnessing is a more favourable response to developing conditions in the basin interior, with settlement moving out *into* the wet and communities investing further resources in the construction of platforms and other timber edifices.

The implication of these possible changes will be considered at the end of the chapter, but it seems likely that some revision of our conventional occupation models will be required in future. What we can say with more confidence at this stage is that these structures, and the routeways into and across these spaces, were gradually inundated over the course of first millennium BC. At first, access by foot or hoof along the roddons may have become seasonally restricted as the surrounding water-table rose. This window would have continued to narrow over time and, by the latter half of the Iron Age, access to parts of the roddon would have been completely curtailed.

Clearly, the transformations within these wetland spaces may have had a more profound impact on the character and rhythm of activities in the Flag Fen Basin, than those directly caused by the contemporary loss of land through peat growth along the fen-edge. Certainly, the changes along the Bradley Fen terraces at this time appear somewhat muted when set against broader developments within the basin interior. In both instances, a more textured image of this landscape and its changing ecotones is provided by the pollen record and buried soils, now sampled at various points around the basin and at Bradley Fen itself (see Scaife and French this volume). Combined, the evidence attests to groundwater base levels rising significantly in this period, leading to increasing fresh water ponding in the centre of the basin and the further expansion of a fen-mire habitat (Scaife 2001). Beyond the interior pools of permanent standing water and towards the shallower basin margins, rich fen conditions would have prevailed. These were characterized by reed-swamp, dominated by semi-aquatic and marginal aquatic plant taxa, which opened onto a fluctuating fringe of alder and willow carr. This, however, was progressively inundated by shallow, muddy-water fen conditions over the course of the period, with saturation encroaching up the shoreline contours to a height of c. 1.0m OD at Bradley Fen by the beginning of the Late Bronze Age and c. 1.4m OD by the end of the Early Iron Age.

At a site-level resolution, only a few details of this later prehistoric fen-edge skirtland and the higher, dryland contours can be provided. Sampled from a damp-ground waterhole (F.1064, described below), the pollen sequence for this period shows an absence of major changes in the local vegetation, suggesting a consistency of stewardship over time (following a shift upwards of pasture post-1500 BC). According to Boreham (see below), these indicate a post-clearance landscape of damp meadows and grassland, characterized by riparian and tall-herb plant communities. In addition, there are disturbance indicators and evidence for some arable activity within this predominantly pastoral setting. Alder carr, although present, appears to form a minor component of the landscape, with the further suggestion of a progressive decline in the tall-herb meadow communities, concomitant with rising water-tables.

From the wider perspective, it seems clear that the area around Bradley Fen was under agricultural management throughout the period (Fig. 5.2). This reconstruction is corroborated by the plant macro-fossils analysed by de Vareilles towards the end of this chapter. Of note is the range of cultivated cereals and arable weed species recovered from Early Iron

Age contexts at King's Dyke. These suggest that the sandy, relatively well-drained soils of the site's higher contours were probably used for cultivation, as in earlier periods. By now, these may have been somewhat depleted in nutrients. It is, perhaps, significant then that small legumes were also recovered from the processed samples, since these are nitrogen-fixing plants which prosper on soils of low fertility and, as such, serve to demonstrate the prolonged, intensive and knowledgeable use of arable soils in this area.

The plant remains also indicate that there was some cultivation of the site's lower, damper contours at Bradley Fen. On a micro-scale, further details of this area are provided by the waterlogged remains recovered from the same waterhole as that sampled for pollen. Apart from the evidence for aquatic species, which probably grew within the feature itself, the botanical remains suggest that the surrounding area was characterized by damp but not completely waterlogged soils, sparsely vegetated and probably disturbed by trampling. This is to be expected in zones frequented by humans and livestock, adding to the wider picture – gleaned from the pollen record – of a water-meadow skirtland exploited for its rich pastures.

Summary of landscape structure, settlement evidence and themes addressed in the chapter

At the risk of simplification, it is helpful to conceive of the lower contours at Bradley Fen as being characterized by seasonally variable floodwater meadows and grassland. This can be contrasted to the image of the higher terraces, including parts of the area encompassed by the King's Dyke excavations, which were seemingly exploited for arable cultivation. Importantly, this basic division in the qualities/use of the different contours appears to go hand-in-hand with a sense of zoning in the distribution, character and even content of the periods cut features. This is aptly illustrated by the phase plan (Fig. 5.3), which shows that the area around the damp-ground fringes between c. 1.0–2.0m OD was the setting for a dispersed linear scatter of waterholes and large pits. Above this contour, the architectural signature shifts. Here, we find the traces of roundhouses, four-post structures and swathes of smaller pits and postholes. On the Bradley Fen side of the excavation transect, these features were thinly scattered and were mainly dated to the Late Bronze Age. At King's Dyke, however, the feature density was significantly greater, with signs that a more agglomerated focus of Early Iron Age occupation developed immediately below the crown of the terrace.

Given that known settlement remains of the Late Bronze Age and Early Iron Age are patchy along the

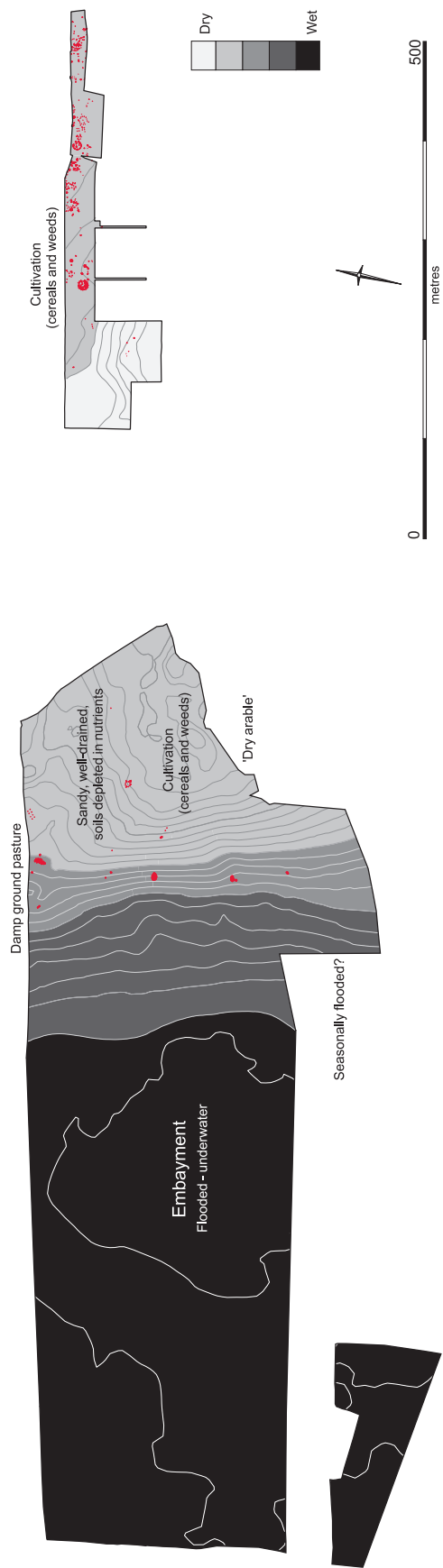


Figure 5.2. Landscape reconstruction for the earlier first millennium BC.



Figure 5.3. Plan of Late Bronze Age and Early Iron Age features at Bradley Fen and King's Dyke.

opposing shoreline at Fengate, the discovery of both dispersed and aggregated occupation foci in this context is important. Not only does this significantly enhance the broader picture of the post-fieldsystem landscape in the Flag Fen Basin, it also affords the opportunity to reflect upon the nature of changes to the settlement record over the course of the late second and earlier first millennium BC. Undoubtedly, one of the most striking discoveries is the Early Iron Age settlement at King's Dyke, where the footprints of 10 individual roundhouses were revealed. These, it should be stressed, are the first unequivocal Early Iron Age buildings to be identified, dated and published from the Flag Fen basin. This is another small landmark for Fenland archaeology: one that is all the more significant since Early Iron Age roundhouses have proved remarkably elusive in most parts of Eastern England.

But with this settlement approaching village-like proportions, questions must be raised about the contemporaneity of all these structures. Similarly, a perspective is needed on the relationship between this reiterative or nucleated mode of occupation in the Early Iron Age and that represented by the more dispersed traces of terrace settlement in the Late Bronze Age. Such a difference may be significant in understanding the way in which groups/communities related to the land and one another – in other words, how tenure was understood and negotiated – particularly in a landscape where the demarcation of land allotment was no longer being defined by the digging of ditches. Furthermore, there is the need to comprehend the relationships between these settlement foci, the activities taking place along the wet edge, and the changing environs within the fen basin itself. In short, patterns in the site's settlement sequence must be set against a broader understanding of the physical and social landscape of the Flag Fen Basin.

In light of these themes/objectives, it is necessary to give a detailed account of the archaeology uncovered. Given the character of the landscape texture already sketched, coupled with the clear patterning of features across the site, it seems appropriate to consider the archaeology in terms of two contrasting zones: features occupying the wetland fringes between 1.0–2.0m OD and the settlement and structural remains above these contours. In each instance, the attributes of these varying feature suites can be read as a reflection of the way these different spaces were attended. The following descriptions are therefore structured with respect to the basic landscape division, beginning with archaeology of the lower damp margins. Breaking with the conventions of the previous chapters, the 'specialist' sections are

subsequently handled more thematically here (and in Chapter 6), in an attempt to open up the discursive framework. These then pave the way for a wider discussion, which touches upon the issues raised above and other themes central to this volume.

Waterholes and scattered pits – the archaeology of the damp-ground contours

Located at the threshold between seasonably damp-ground and the permanently waterlogged fringes of the basin-edge, were a series of 22 pits and dispersed waterholes (Fig. 5.4). These features varied in their magnitude and morphology. They ranged from small, individual sub-circular cuttings with single fills, through to large, irregular groups of intercutting pits or single waterholes displaying complex depositional sequences (dimension range: 0.41–5.80m in diameter; 0.14–1.48m in depth). Spatially, these features/feature clusters were strung out at regular intervals along the wet-edge, with gaps between c. 50 and 70m separating each discernible group (labelled A–E). Warranting more detailed treatment are the wells/waterholes and some of the larger intercutting pit complexes, each of which yielded standout artefact assemblages or other deposits of significance.

Key features – pit complexes and waterholes in Groups A and D

The key components of Group A were an intercutting waterhole complex, comprising six hollow-like features (F.486, F.501–02, F.504, F.509 and F.528) and a discrete well/waterhole F.480. The exact sequence of pitting in the former was hard to establish, partly because of the shallow nature of most features (five measuring just 0.40–0.70m in diameter; 0.14–0.18m in depth) and the fact that later pits cut the complex. In this group, however, by far and away the largest waterhole was F.528, located at the southern tip of the cluster. Roughly circular in plan, with a diameter of 2.20m and a depth of 0.78m, the pit displayed relatively steep sides and an irregular base, partially undercut by water erosion. Unlike the other pits in the cluster, which all contained single, homogenous deposits of grey-brown silt, F.528 displayed a varied fill sequence, with multiple bands of silty-clay, separated by edge-weathering slumps of sandy gravels. The basal fills of the pit were waterlogged and immediately above the primary silts lay a substantial dump of partially articulated animal bone, dominated by the butchered remains of a minimum of six cows (Fig. 5.5).

The bone dump has obvious parallels with deposits from a series of Middle Bronze Age waterholes

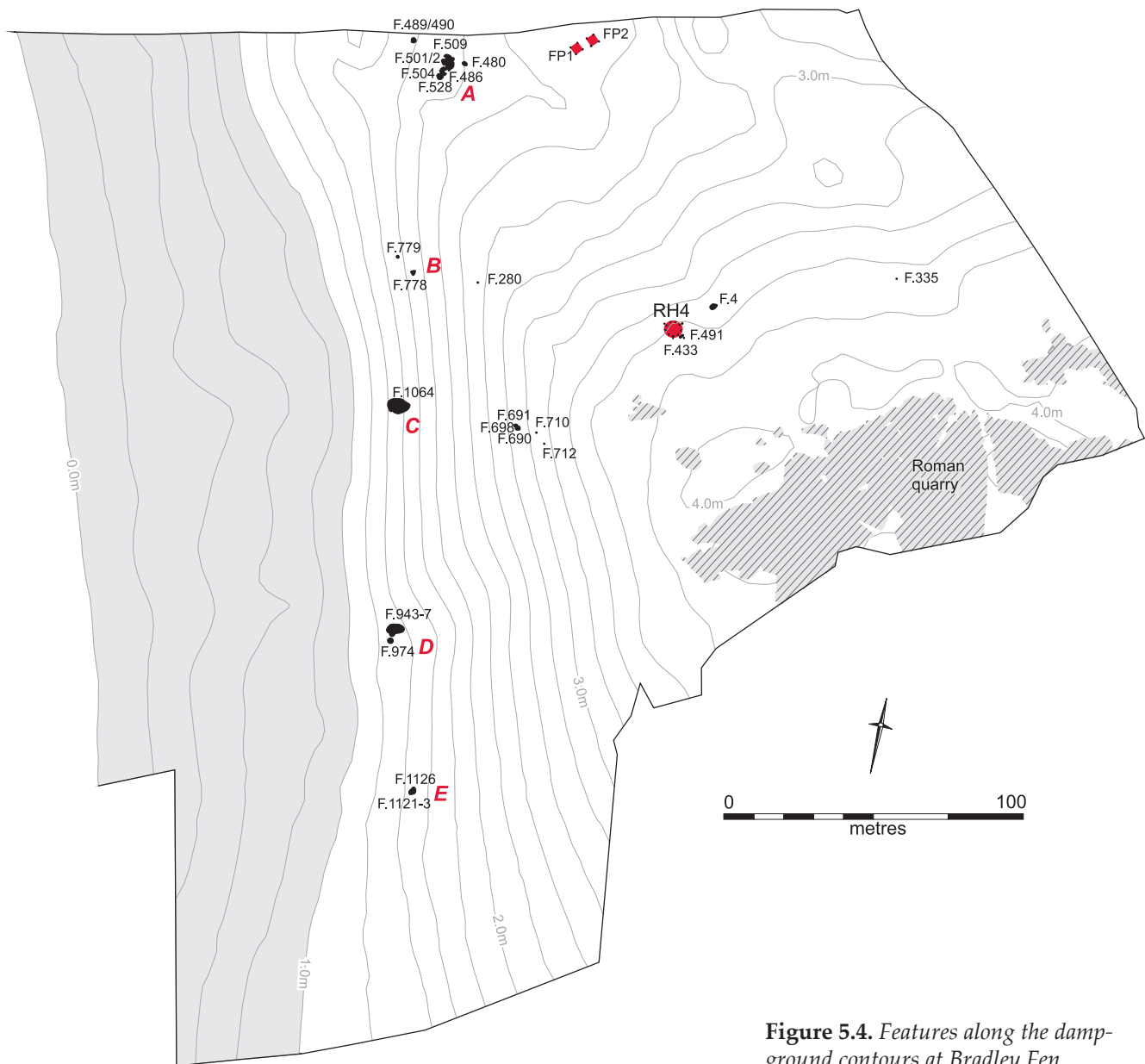


Figure 5.4. Features along the damp-ground contours at Bradley Fen.

detailed in the previous chapter (F.34, F.391, F.544 and F.991). Indeed, similar dumps of animal bone were recovered in Middle Iron Age pits along this same damp fringe (albeit at a slightly higher elevation) and, as such, constitute a recurrent but quite distinctive signature of this wet-edge zone at Bradley Fen. However, tempting though it is to view this patterning as evidence for a persistent depositional tradition, it would take special pleading to argue that the logic behind these actions were consistent over such a long period of time. In this context at least, it is possible that such an intentional deposit may have taken on some special significance, perhaps as part

of rites bound up with the formal decommissioning of the waterhole. Of course, there may be alternative pragmatic reasons for the treatment of these remains, but since we find evidence for other objects – namely pots – being selectively interred in identical contexts, these kinds of argument seem to hold less weight.

A prime example is the adjacent waterhole F.480, located 7.5m northeast of F.528. Although slightly smaller in plan (1.27m in diameter; 1.03m in depth), this sub-circular feature was more well-like in profile with steep sides, slightly undercut towards the base. The primary fills were again silt-rich and waterlogged, yielding small twigs, flecks of charcoal and the base

Animal bone dump in waterhole F.528 (Vida Rajkovača)

This included a total of 150 assessable fragments from a minimum of six cows, including one piece of worked bone. The worked piece represents a

proximal cow metatarsus which has been split axially and polished to create a gouge-type tool. The working end of the tool is missing.

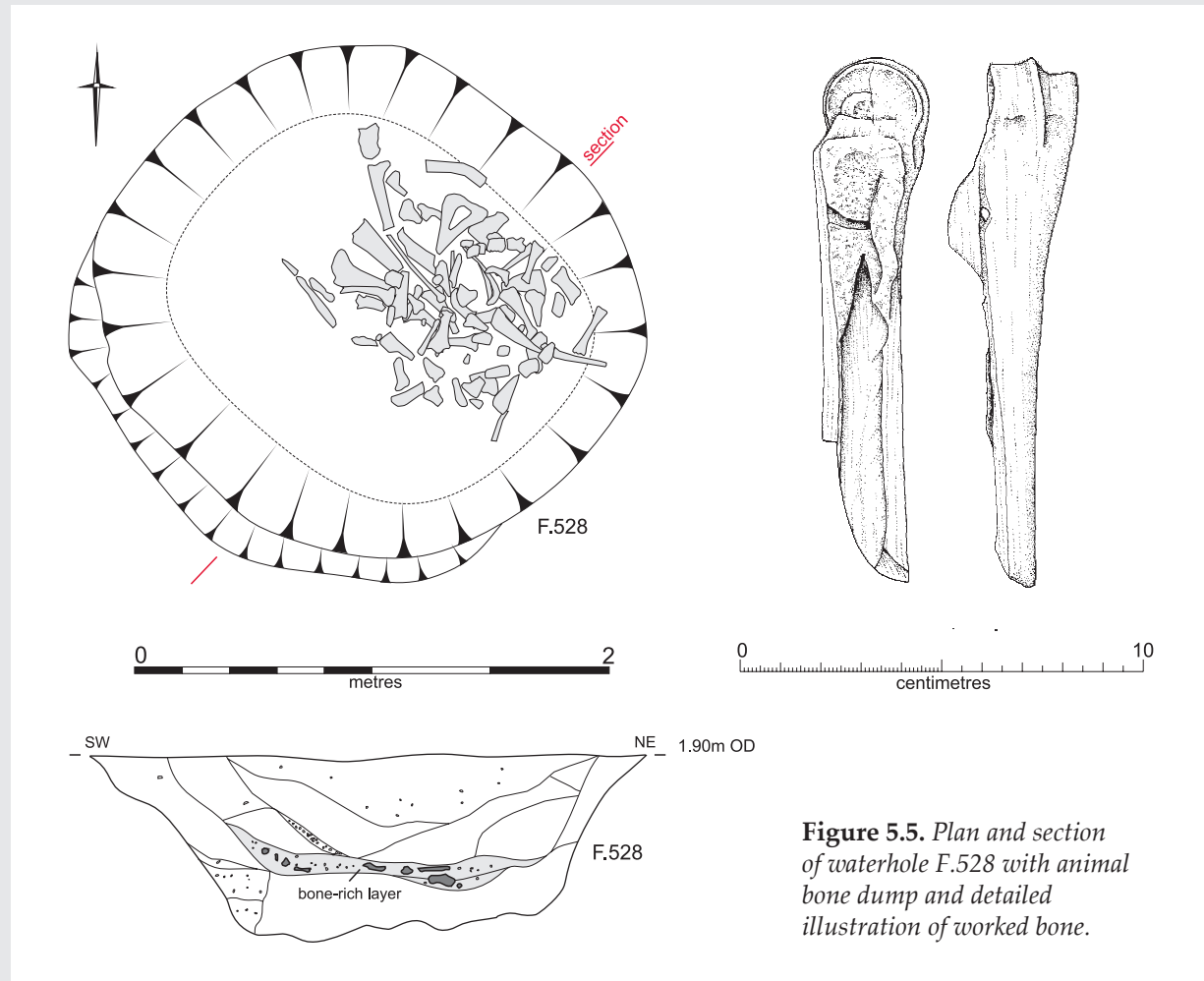


Figure 5.5. Plan and section of waterhole F.528 with animal bone dump and detailed illustration of worked bone.

sherds of a pot. Immediately above, and possibly deposited at the foot of a re-cut, were large refitting fragments of a substantially intact tripartite bowl (Fig. 5.6). This fineware vessel and other sherds from F.480 (38 sherds, 371g) date to the Early Iron Age and were recovered along with fragments of animal bone (57 pieces, 857g) and a single piece of slag (237g).

The comparatively 'fresh' condition of the tripartite bowl from F.480 mirrored that of a contemporary vessel recovered from pit F.945: the largest and latest cutting in the Group D waterhole complex (Fig. 5.7).

In this instance, the broken pot, a small decorated coarseware jar, was interred at the base of the pit. This was 1.04m deep, waterlogged and filled with dark silts preserving fragments of roundwood: one of which produced an Early Iron Age radiocarbon date of 740–390 cal BC (Beta-262623: 2400±40 BP). Small branches and other pieces of wood were scattered throughout the rest of the lower profile of the waterhole complex, which in plan measured 5.85m in length and 4.06m in width (max.). The excavated sections revealed five irregularly profiled intercutting

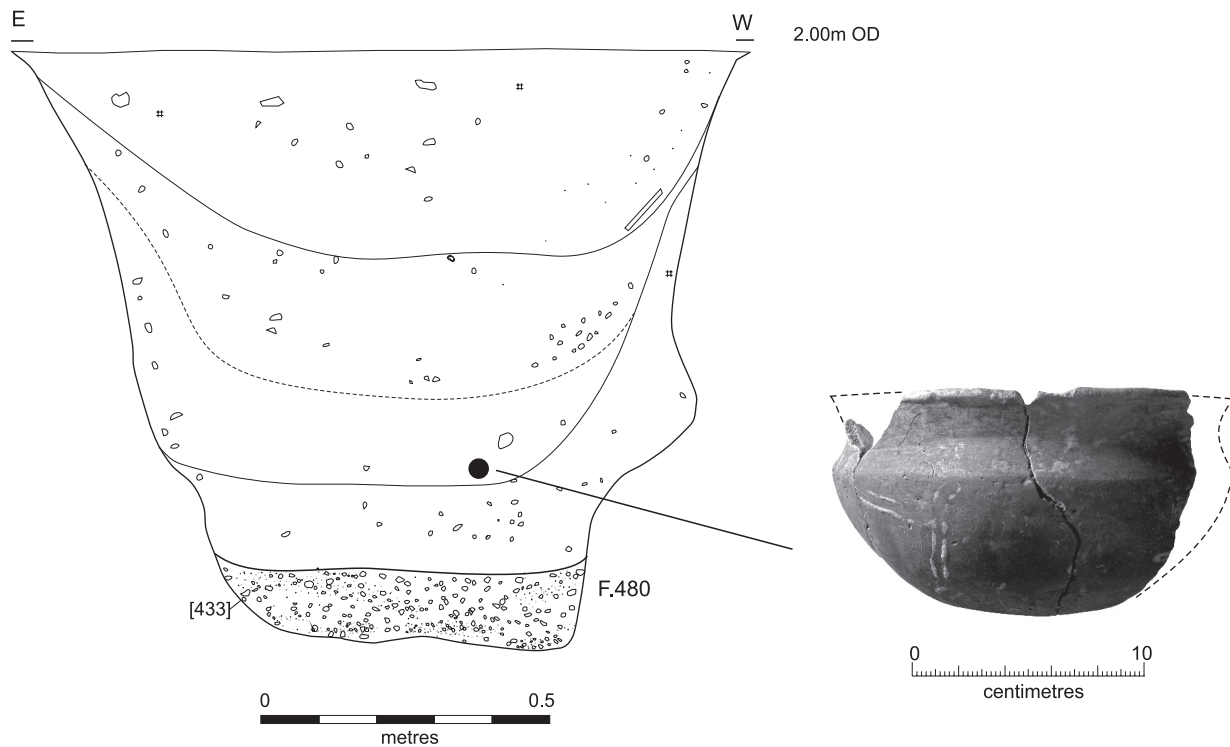


Figure 5.6. Section of Early Iron Age well/waterhole F.480, with photograph of the semi-complete fineware bowl from its lower fills.

pits, F.943–47, the depths of which ranged from 0.55 to 1.04m. From these, the largest wood fragment was recovered in the middle silts of F.946, illustrated in Figure 5.7. This consisted of a medium-sized bough or trunk the end of which had been worked to a point. Other finds of note included an Early Iron Age copper-alloy pin, recovered from the tertiary silts which capped all five of the pits in the complex. Also warranting mention is the sizeable faunal assemblage (162 pieces, 2909g), much of it derived from the basal silts of F.945 (120 pieces, 1553g). This included the butchered remains of juvenile and adult pigs, sheep and cattle: the vertebrae of several being split longitudinally, suggesting carcasses were being divided into left and right side portions.

Key features – waterhole F.1064, Group C

Whilst each of the major waterholes/pit complexes yielded noteworthy bone dumps and/or placed artefacts of one kind or another, the most extraordinary find came from the base of F.1064 (Figs 5.8 & 5.9). Here, preserved through waterlogging, were the remains of a wooden tank, constructed from split timber uprights arranged around a large rectangular base block, fashioned from a section of a dug-out boat. The waterhole itself was the largest discrete feature revealed at

Bradley Fen: an oval-shaped hollow, 5.80m long, 5.00m wide and cut to a depth of 1.48m. The upper profile displayed an exaggerated weathering cone, the sides of which were irregularly pocked by small delves ('pits' F.1026, F.1116 and F.1118), probably resulting from a combination of trampling and slumping. These gave way to a central sub-rectangular shaft (2.44m long and 1.80m wide) with steep but not vertical sides. This also had a slightly weathered appearance, particularly around the long edges of the cutting. The wooden tank was set within the shaft. Most of the preserved uprights remained flush against the side of the base block, forming a lining, behind which gravels had been packed. One post, however, was set slightly further back and is perhaps indicative of a repair. In total, six split timber uprights survived, though sockets for at least nine others were identified.

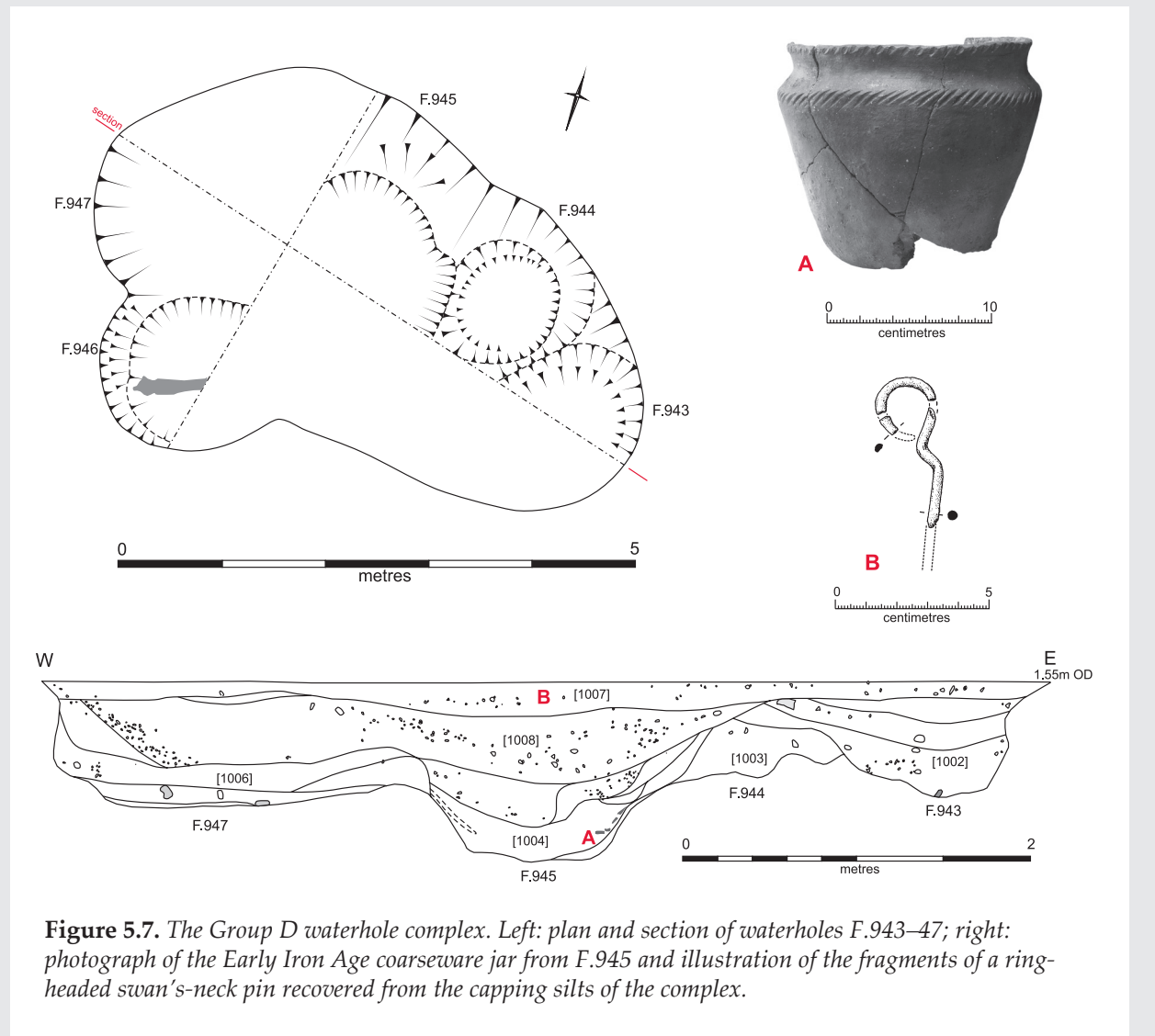
Tank components, construction sequence and function (Maisie Taylor)

As outlined above, the surviving wooden components of the tank were as follows: a rectangular base block, fashioned from a large section of a dug-out boat; a central roundwood post, driven through an existing square hole cut in the bottom of the craft; and six split timbers set vertically around the sides. Those features

The Group D waterhole complex: pin description (Grahame Appleby)

The head of the pin partially survives, albeit broken, with an estimated diameter of c. 19.5mm. The surface possesses a dark to pale green powdery patina. As reported by Cunliffe (2005, 458), this type of pin is found throughout Britain, but with a distinct southern bias. Typologically, plainer pins,

of which this is most probably an example, are later in date than the more elaborate 'sun-flower' type and have been dated to the earlier Iron Age. Three comparable examples were recovered during the Flag Fen excavations (Coombs 2001, 275, fig. 10.9, nos. 200–02).



pertaining to the original construction of the boat will be discussed at the end of this chapter. Here the focus is on its reuse in this context, with only traits relevant to the description of the tank being brought to the fore.

The base block consisted of a section, 2900mm in length and 750mm in width, taken from the bottom of a dug-out boat. The thickness of the wood varied between 95mm in the centre and 150–160mm towards

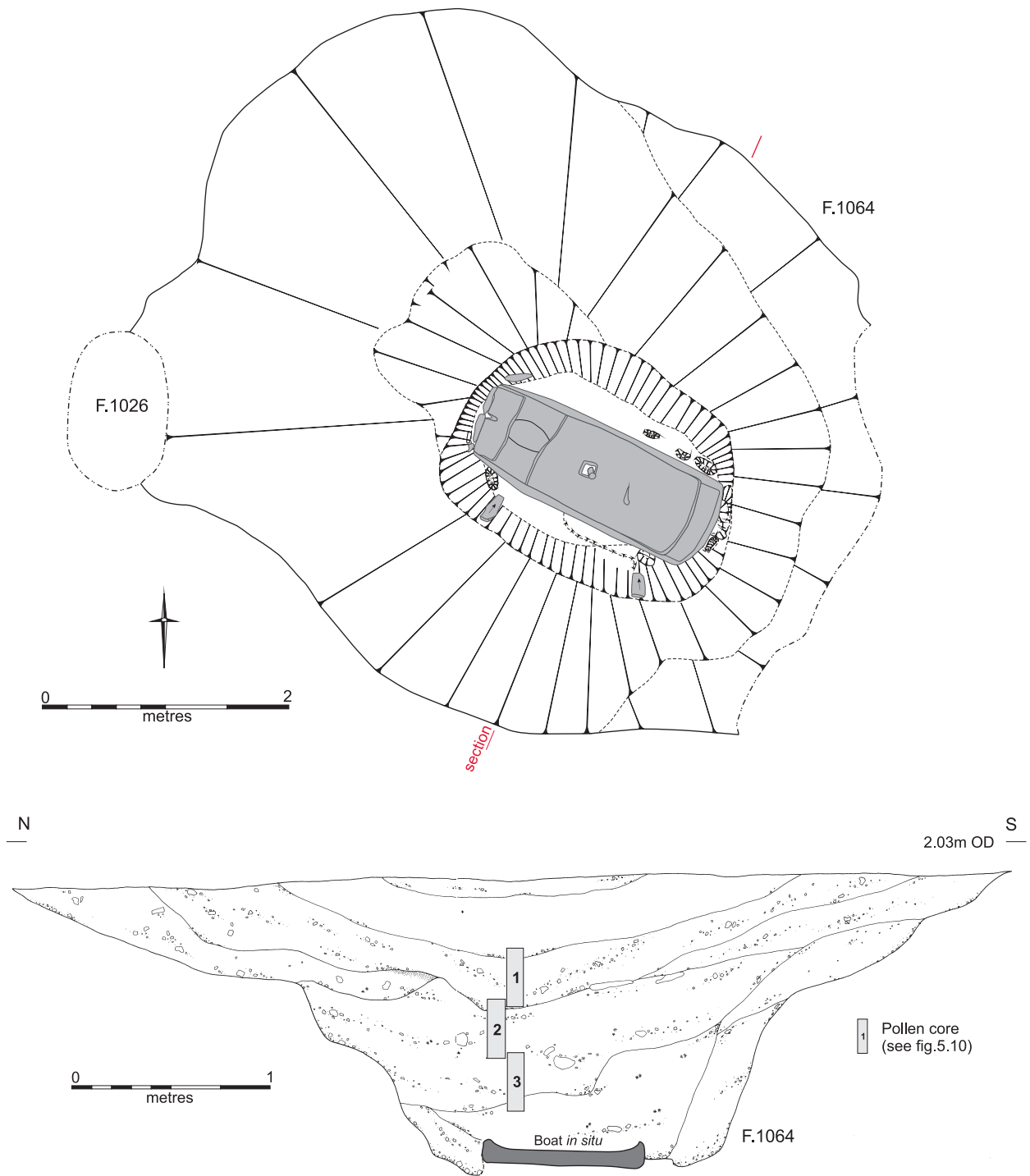


Figure 5.8. Plan and section of waterhole F.1064 showing the remains of the wooden tank and the base block fashioned from a dug-out boat section.

the sides; the underside being virtually flat, the upper surface concave. A crucial feature with regards the tank was the square hole (140mm by 130mm) cut at the centre of the base block, through which a stake had

been inserted. This stake was high quality roundwood, 62mm in diameter, with a surviving length of 690mm. The straightness of the grain, together with the lack of knots suggests that it was probably a coppiced pole. It

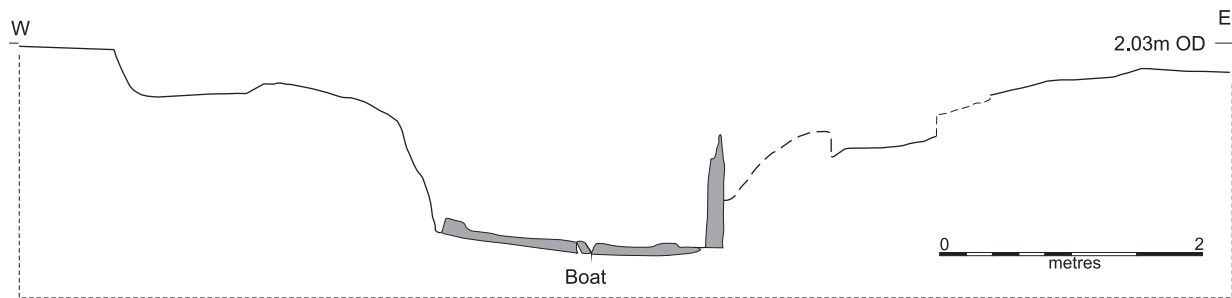


Figure 5.9. Profile and photographs of the surviving tank components.

had been hammered through the square hole, into the underlying gravels. The bottom end of the post was trimmed from all directions. The tip was damaged, probably when it was driven in.

In its original configuration, there would have been horseshoe shaped setting of vertical timbers at each end of the base block. Except for one timber which was more outlying, all of the uprights at the southeast end had been removed before the pit silted-up, but the shape and size of the postholes suggests that they were of similar dimensions to those surviving at the northwest end.

The six surviving verticals were radially split oak (*Quercus* sp.) timbers, with their bark removed

(dimensions ranging from 480 to 1445mm in length, 90 to 200mm in width and 30 to 75mm in thickness). Although the wood was in very poor condition when excavated, it was originally good quality, very slow grown and with a straight grain. All but two had been further modified by light hewing, making them slightly more square in section. This squaring was not done in the same way on every timber. Three were hewn parallel to the grain: one extensively to make a more parallel-sided plank; two being only partially trimmed up. A fourth timber had the thinner pith edge removed to make it squarer, whilst the two remaining uprights were unmodified. Furthermore, the bottom ends of four of the timbers (two could not be retrieved) were

trimmed from two or four directions to make them more pointed, presumably to aid insertion into the ground. These blunt points had subsequently been slightly damaged when driven in. Two of the timbers had surviving toolmarks, one 46mm wide and 5mm deep (46:5) and a partial one, 45mm wide and 2mm deep (45:2). These two toolmarks fall well within the range of widths and curvature for bronze socketed axes (Taylor 2001, 197, table 7.28). One of the timbers preserved at a high level has evidence for woodworm with vertical exit holes, suggesting that it remained above water, but damp and soft, long enough to attract the insects.

In terms of the building sequence, the construction of the tank probably started with the positioning and levelling of the base block. The central post was then hammered far enough into the underlying gravel to make it secure. This passed through the square hole in the base block with room to spare (a hole which was part of the original boat and not a component of the tank). However, the post was relatively slender, which makes it unlikely that it was used for locating the base block or pegging it into place. Indeed, if the base block was waterlogged when it was set in the pit, it would not have floated. Pegging was only needed if the base was dry or not completely waterlogged. Interestingly, when it was first uncovered, the boat section already showed signs of cracking along the grain. This is a classic sign of drying out and could date from any time in the life of the wood, including the period before it was placed in the pit. Whatever the circumstances, it is likely that the top of the post was never flush with the base of the tank. In its original state it was probably much taller and may have acted as a guide or support for anyone using the tank when full of water.

Judging from the damage to their terminal ends, the vertical timbers were hammered into the ground and not set into pre-dug holes. As they respected the slightly curved ends of the base block, it seems likely that the verticals were added (and removed) after the positioning of the base, avoiding the need to lift the block over them. However, these vertical timbers do not make a continuous wall. Nor were they all modified in the same way. This suggests the structure was fairly ad hoc, as does the reuse of the boat section, and adds to the emerging picture that domestic and functional structures were often made of material derived from the wood pile, including the reuse of earlier timbers where suitable (Allen 2009, 146; Taylor 2009b, 120–21).

With regards to the excavated plan of the tank, several observations can be made. Firstly, the vertical timbers, including those which have been removed, were set fairly deep, which would have made them strong enough to act as a revetment. However, the

structure only had vertical timbers/sockets at the two shorter ends of the base block and, whilst these partially extended round the corners and down the longer sides, it still left a substantial gap with no evidence for further settings. Of course, this need not imply that the tank was not originally framed with wood on all four sides. As the timbers at one end have been removed, it is possible that the sides were removed too. Indeed, if they were set horizontally, for example, it is unlikely that they would have left any archaeological trace.

The second observation is that there were no signs of any further lining to the tank. Although there is minimal evidence to suggest that some tanks were lined to make them watertight in this period (Taylor 2009a, 86), this is unlikely here, given the hole in the base block. At one time there may have been some kind of skirt to stop loose material falling into the water, but this would not have contributed to making the structure watertight. Perhaps more tellingly, the higher preservation on sections of wood further down the profile of the verticals, suggest the bottom of the tank was rarely or never dry. This implies that it was fed by groundwater, which was free to move in and out of the structure.

On the question of function, it seems likely that the tank was designed for access to cold groundwater, making it different to those constructed for the purpose of indirect water heating. Certainly, water in a tank fed from the ground such as this would have been very difficult to heat. More to the point, given the absence of contemporary burnt stone mounds, it is hard to imagine how this might have been done. Still, its architecture does seem overly elaborate if the purpose was simply to supply cold water; a 'standard' waterhole with revetted sides and a step in the bottom would have surely sufficed. Clearly there was considerable investment in this construction, particularly with the fashioning of the base block, which must have been deemed important to the 'correct' functioning of the tank, whatever that may have been.

Deposits and finds from the waterhole

The fill sequence of the waterhole was relatively simple, with no traces of re-cuts or other obvious eventful episodes of deposition. It comprised a basal layer (0.45m thick) of very dark grey clayey-silt above which similar but less organically rich deposits formed alongside occasional slumps of gravels on the sides. Artefacts were rare considering the size of the feature and its potential as a catch for surrounding settlement debris. Objects from the lower profile included fragments of animal bone, three plain body sherds of pottery (71g), a piece of fired clay (260g) and a single piece of slag (174g). Unlike some of the finds associated with

the other waterholes/pit complexes, these occurred as inclusions within the general matrix of the fills, as opposed to forming discrete deposits. The pot sherds were found in silts immediately above the boat section. Although fairly undiagnostic, the character of their fabrics was in keeping with that of the ceramics more securely dated to the Early Iron Age.

By contrast, the finds from the upper profile of the waterhole were of clear Middle Iron Age origin, including sherds of Scored Ware (discussed in the following chapter). These were recovered just below the capping deposits, which comprised a band of desiccated peat topped by an alluvium plug. On the surface, the fills appeared as concentric rings and had formed in a shallow depression caused by the collapse or compaction of the underlying organic sediments. The waterhole was therefore a persistent feature of the first millennium BC landscape at Bradley Fen. Although it probably had its origins around the Bronze Age–Iron Age transition, it would still have been visible as a large, shallow saturated hollow over four to five hundred years later, when Middle Iron Age material began to be discarded within it. Crucially, because of this long history and the gradual accumulation of organic silts, it was possible to recover important pollen sequence for the period, detailed below.

Pollen analysis (Steve Boreham)

Three 30cm monolith tins were taken from the section of the waterhole, covering an 83cm part of the sequence spanning four different clayey-silt contexts (I–IV, see Fig. 5.8). From these, six samples of sediment were prepared using the standard hydrofluoric acid technique and counted for pollen at $\times 400$ magnification using a high-power stereo microscope. The data are presented in the pollen diagram in Figure 5.10.

The pollen concentrations encountered ranged between 31,094 and 56,266 grains per ml. Pollen counting was somewhat hampered by the presence of finely divided organic debris, but preservation of the fossil pollen grains (palynomorphs) was in general quite good for most samples. Assessment pollen counts were made from a single slide for each sample. The pollen sums achieved ranged between 68 and 191. Although these counts do not exceed the statistically desirable total of 300 pollen grains main sum, four exceed a count of 100 grains. As a consequence caution must be employed during the interpretation of these results.

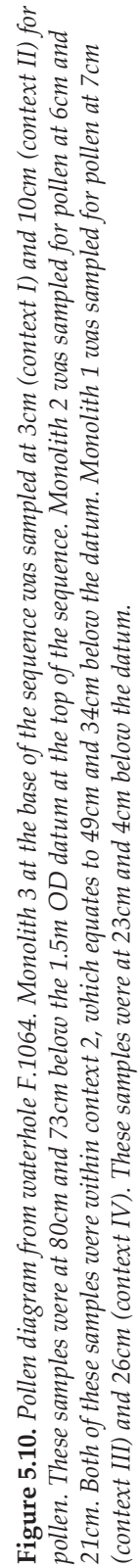
Context I (Late Bronze Age–Early Iron Age): The basal pollen sample from monolith 3 was dominated by grass (*Poaceae*) pollen (39.1%), with a wide range of herbs including the pink family (*Caryophyllaceae*) (14.1%), the daisy family (*Asteraceae*) (together 10.9%), the disturbance indicator ribwort plantain (*Plantago lanceolata*) (3.3%) and importantly cereal pollen (3.3%). Lower plants included

the polypody fern (*Polypodium*) (1.1%) and other undifferentiated spores together accounted for 13.1%. Arboreal taxa included alder (*Alnus*) (3.3%), hazel (*Corylus*) and pine (*Pinus*) (both 1.1%). Aquatic plants are represented by the emergents bur-reed (*Sparganium*) (3.3%) and reedmace (*Typha latifolia*) (1.1%). The large proportion of heavily built *Caryophyllaceae* and *Asteraceae* pollen grains in this sample suggests that it may have been modified by oxidative soil processes, leading to an increase in resistant types. However, the low proportion of resilient pteropsid spores may mean that these resistant pollen types represent a genuinely important part of a rich meadow tall-herb community. This grassland and meadow environment also has riparian (bank-side) elements in addition to disturbance indicators and evidence for some arable activity. Wet woodland would have been a minor part of the vegetation in this landscape.

Context II (probably Early Iron Age): Three samples fall within context II. The upper pollen sample from monolith 3 was the lowest in the context and was dominated by grass (*Poaceae*) pollen (41.2%), with a wide range of herbs including the daisy family (*Asteraceae*) (together 17.6%), the pink family (*Caryophyllaceae*) (8.8%), the disturbance indicator ribwort plantain (*Plantago lanceolata*) (2.9%) and notably cereal pollen (1.5%). Undifferentiated fern spores together accounted for 14.7%. Arboreal taxa included alder (*Alnus*) (2.9%), hazel (*Corylus*) and willow (*Salix*) (both 1.5%). Aquatic plants are represented by bur-reed (*Sparganium*) (5.9%) and reedmace (*Typha latifolia*) (1.5%). The large proportion of *Asteraceae* and *Caryophyllaceae* in this sample hints that it may have been post-depositionally modified by microbial activity. However, the relatively small amount of resistant pteropsid spores suggests that *Asteraceae* and *Caryophyllaceae* were present in a diverse tall-herb grassland community, with riparian and disturbance indicators. There is also a little evidence for arable activity. Alder carr (wet woodland), although present, appears to have been only a small element in this landscape.

The lower pollen sample from monolith 2 was located in the middle of this context. The pollen assemblage was dominated by grass (*Poaceae*) pollen (35.5%) and pteropsid spores (together 21.5%), with a wide range of herbs including the daisy family (*Asteraceae*) (together 7.5%), sedges (*Cyperaceae*) (5.6%), the pink family (*Caryophyllaceae*) (2.8%), ribwort plantain (*Plantago lanceolata*) (1.9%) and notably cereal pollen (2.8%). Arboreal taxa included alder (*Alnus*) (4.7%), willow (*Salix*), juniper (*Juniperus*) (both 1.9%) and birch (*Betula*), pine (*Pinus*), oak (*Quercus*), maple (*Acer*) and hazel (*Corylus*) (all 0.9%). Aquatic plants are represented by the water milfoil (*Myriophyllum alterniflorum*) (0.9%), bur-reed (*Sparganium*) (6.5%) and reedmace (*Typha latifolia*) (1.9%). The large proportion of pteropsid fern spores in this sample hints that it may have been post-depositionally modified by microbial activity. Since the proportion of *Asteraceae* and *Caryophyllaceae*, which have resilient pollen grains, does not seem to be particularly large, these fern spores could represent damp and shady conditions, perhaps within nearby wet alder woodland (carr). The principal reconstruction from this assemblage is one of damp meadow and grassland with riparian and tall-herb communities. The combination of disturbed ground indicators and cereal pollen indicates a little arable activity within a mainly pastoral setting.

The upper pollen sample from monolith 2 was the highest in the context and was dominated by grass (*Poaceae*) pollen (55.9%), with a range of herbs including the daisy family (*Asteraceae*) (2.9%), the pink family (*Caryophyllaceae*) (2.9%), the fat hen family (*Chenopodiaceae*) (2.9%), sedges (*Cyperaceae*) (2%) and cereal pollen (1.5%). Undifferentiated fern spores together accounted for 15.6%. Arboreal taxa included alder (*Alnus*) (2.9%), hazel (*Corylus*) and willow (*Salix*) (both 2%), pine (*Pinus*) and oak (*Quercus*) (both 1%). Aquatic plants are represented by bur-reed (*Sparganium*) (6.9%) and reedmace (*Typha latifolia*) (2.9%). This sample was arguably the best-preserved of the sequence, showing little or no evidence for post-depositional



changes to the pollen spectrum. The pollen assemblage indicates a meadow and grassland environment with riparian elements. There is some evidence for arable activity. Wet woodland appears to be only a minor part of the vegetation represented.

Context III (Middle Iron Age): The lower pollen sample from monolith 1 was dominated by grass (*Poaceae*) pollen (34.6%) and pteropsid spores (together 29.3%) with a range of herbs including the daisy family (*Asteraceae*) (together 8.3%), sedges (*Cyperaceae*) (3.1%), members of the cabbage family (*Brassicaceae*) (2.6%) and cereal pollen (3.1%). Arboreal taxa included alder (*Alnus*) (3.1%), oak (*Quercus*) (2.1%), juniper (*Juniperus*) (2.1%), birch (*Betula*), pine, (*Pinus*), elm (*Ulmus*), ash (*Fraxinus*) and hazel (*Corylus*) (all <1.6%). There was a large proportion (21.5%, expressed outside the main sum) of bur-reed (*Sparganium*) pollen in this sample suggesting close proximity to a fringe of emergent vegetation, such as a fen or reed-bed. The large proportion of resistant pteropsid spores in this sample suggests that this assemblage may have been modified by post-depositional oxidation. However, the relatively small amount of *Asteraceae* and *Caryophyllaceae* hint that these fern spores could represent damp and shady conditions, perhaps within nearby alder carr (wet woodland), which although present, appears to have been only a small element in this landscape. There is also a little evidence for arable activity, although it is clear that the landscape was dominated by meadow and grassland communities, with riparian and disturbance indicators.

Context IV (probably Middle-Late Iron Age): The upper pollen sample from monolith 1 at 26cm (4cm below datum) was dominated by pteropsid spores (together 39.7%) and grass (*Poaceae*) pollen (33.5%), with a wide range of herbs including sedges (*Cyperaceae*) (5%), members of the cabbage family (*Brassicaceae*) (1.9%), members of the cow parsley family (*Apiaceae*) (1.9%) and also notably cereal pollen (1.2%). Arboreal taxa included alder (*Alnus*) (3.1%) and birch (*Betula*), oak (*Quercus*), juniper (*Juniperus*) and hazel (*Corylus*) (all <1.2%). Obligate aquatic plants are represented by the fringing emergents bur-reed (*Sparganium*) (5.6%) and reedmace (*Typha latifolia*) (1.2%). The large proportion of pteropsid spores in this sample suggests that this assemblage may have been post-depositionally modified by oxidative soil processes, leading to an increase in resistant types. However, the proportion of *Asteraceae* and *Caryophyllaceae* is not particularly enhanced, so these fern spores may indicate damp and shady conditions, perhaps within nearby wet alder woodland (carr). The main signal from this assemblage is one of grassland and damp meadow, with tall-herb communities and riparian environments indicated. Despite the presence of cereal pollen, there are few disturbed ground indicators, suggesting a largely pastoral landscape.

In summary, the pollen assemblages from this sequence are all rather similar, indicating a post-clearance pastoral landscape of meadows and grassland with some arable activity and a little wet woodland. The presence of high proportions of pteropsid spores and resistant pollen types in most samples hints that these assemblages may have been distorted by post-depositional oxidation of the sediment. However, the degree to which this is true is hard to determine from the data. It seems clear that the area around Bradley Fen was under agricultural management from the Later Bronze Age through to the Middle Iron Age. However, the lack of major changes in the vegetation shows a consistency of stewardship throughout that time. If the trends in the pollen diagram (Fig. 5.10) are to be believed, then

over time there was a progressive decline in tall-herb meadow communities and rising water-tables indicated by bur-reed and fern spores. The pollen assemblages appear to be entirely consistent with the Iron Age dating of the deposits and the position of the Bradley Fen site on a gravel terrace adjacent to the River Nene.

Discussion – land-use, land allotment and the nature of activities along the damp-ground contours

The lower terraces at Bradley Fen (1.0–2.0m OD) were home to a dispersed linear scatter of pits dotting the damp-ground contours. In one way or another, most of the features in this zone were constructed as a means of gaining access to the groundwater. As detailed above, some were discrete waterholes, or possibly wells of various sizes, whilst others resemble more irregularly shaped hollows, with evidence of reworking. What is clear is that the water-table was perched very high in this area during the Late Bronze Age and Early Iron Age, meaning that any cutting deeper than c. 0.50m would have filled with groundwater. In these circumstances, where minimal effort was required to gain access, there was little point in investing in revetment structures or wattle linings for these features – traces of which would have survived in the waterlogged conditions. Indeed, even the more substantial pits were rarely deeper than 1.00m and would have been relatively straightforward to maintain without these additions. As a consequence, instead of one or two large long-lived waterholes in this landscape, what we find are a greater number of smaller features reworked over time – a practice which gave rise to lobed and somewhat irregularly profiled, pit/waterhole complexes.

The obvious exception to this pattern is waterhole F.1064. On first impressions, this appears to be a ‘classic’ well or waterhole feature of the period. However, considering the high groundwater-table in this context, the size and depth of the pit seems excessive. This sense of over-investment for a mere waterhole is echoed in the construction of the wooden tank at its base. Since a stake and wattle revetment would probably have been sufficient for the sides, the solid tank structure seems overly elaborate, if indeed it was designed to serve this simple purpose. Not only did its construction involve the reworking of a dug-out boat section, whose seasoned-oak heartwood could only have been cut with iron axes (even if already waterlogged (see Taylor below), but required the erection of multiple split-oak timber uprights – wood that was clearly valued enough to salvage at a later date. On balance, it is likely that this feature had a specific function, at least at the beginning of its history. What this was exactly is harder to say, though the base board presumably played a crucial role.

No doubt in later life, F.1064 served as a more conventional waterhole and, like the other pits in this zone, its purpose may have fluctuated over time: some features starting as wells for human use, subsequently becoming reworked into waterholes for livestock. Interestingly, at the point at which several of these pits stopped being maintained, we find artefact deposits which seem to mark their shift in status. These included the placement of single, semi-complete pots and dumps of butchered animal bone. In fact, beyond these deposits, there were very few artefacts from this whole area, demonstrating its distance from the main settlement zone/core further upslope. As such, it is difficult to argue that the majority of these objects arrived in the ground through pathways of routine refuse maintenance. Of course, this may account for some of the objects, including the fragments of slag indicative of metalworking in the vicinity, but not the set-piece practices of deposition responsible for the semi-complete pots or bone dumps.

One of the most significant finds assemblages from this zone was the animal bone dump from F.528, the quantity and condition of which suggest that a minimum of six cows were butchered in a single event. This could be interpreted in several ways. However, it is tempting to view the deposits as the remains of a feast, coinciding with, or perhaps even marking the decommissioning of

the redundant waterhole and, potentially, the opening of a new adjacent feature. Indeed, closing and renewing waterholes in the context of community gatherings was possibly one means by which local groups reiterated their rights over surrounding plots of pasture as well as the waterholes themselves. In a landscape where the expression of tenure or ownership was no longer marked by the construction of ditched field boundaries, this may have emerged as a new mechanism for laying claims over land.

This argument seems more credible when we take into account the distribution of the waterholes and their sympathetic relationship to the former Middle Bronze Age field ditches (Fig. 5.11). These boundaries were already silted by the end of the second millennium BC, though parts of the grid may still have been marked by denuded banks or hedges. Of importance is the fact that the spacing of the waterholes echoed the spacing of the silted ditches at Bradley Fen, suggesting that the land partitions, once farmed by these boundaries, had a lingering currency. In other words, the demise of ditched field boundaries did not necessarily signal an abrupt end to fieldsystems *per se*. Rather it marked a change in the way that communities physically inscribed/affirmed their connections to different blocks of land, the 'separateness' of which was collectively

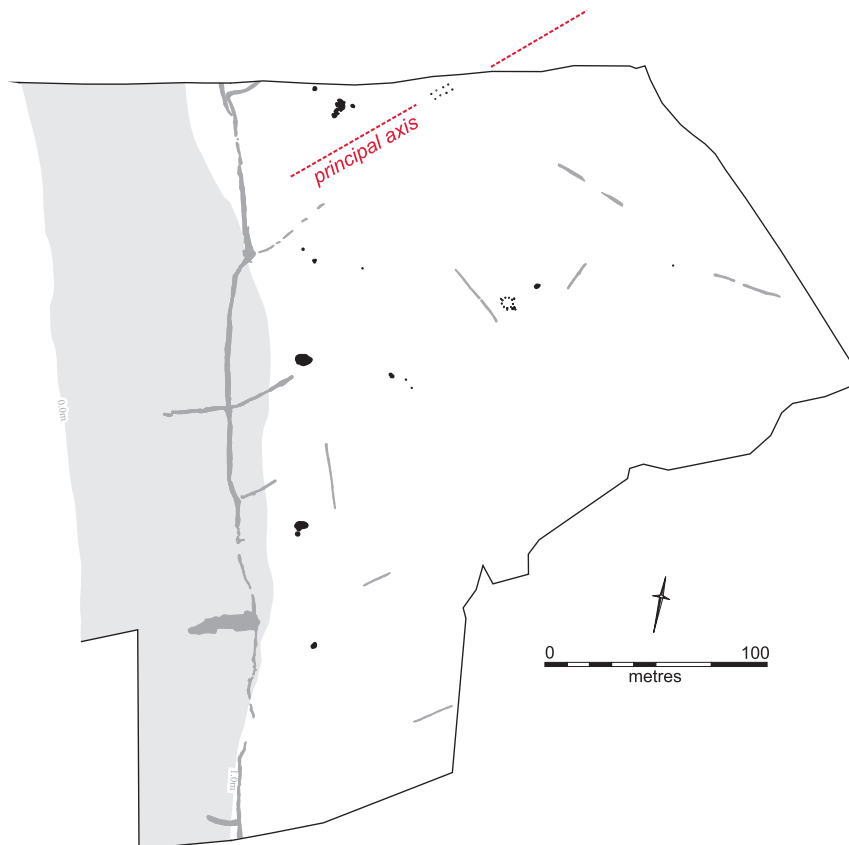


Figure 5.11. The relationship between Late Bronze Age and Early Iron Age features at Bradley Fen and the axis of the former Middle Bronze Age fieldsystem. Not only do the waterholes and roundhouse appear to be spaced in relation to these boundaries, but the alignment of the two four-post structures mimics their principal axis (structures described below).

acknowledged in the centuries both before and after the field boundary 'horizon' of the Middle Bronze Age. In archaeological terms at least, the redigging of waterholes in these locations was as a less obvious or indirect mechanism for expressing these tenurial relationships, but ones that still served to maintain vestiges of an earlier grain in the cultural landscape. However, this began to change over the course of the Late Bronze Age and Early Iron Age, as claims over land were increasingly articulated through an investment in the architectures of settlement.

Late Bronze Age settlement and structural remains – the archaeology of the dry terraces at Bradley Fen

With the possible exception of one post-built roundhouse at King's Dyke (Roundhouse 12, described below), the evidence for Late Bronze Age settlement on the dry, free-draining gravels was confined to the Bradley Fen terraces. Here, above the 2.0m contour, was a light scatter of widely dispersed features including a roundhouse, two four-post structures and a handful of pits and postholes. All the features bar the four-post structures yielded small scraps of Late Bronze Age Plainware Post-Deverel Rimbury (PDR) pottery, or other artefacts diagnostic of this period.

Structures

Roundhouse 4 was located towards the crown of the terrace at Bradley Fen, between 3.4 and 3.6m OD. It comprised a central ring of nine small, evenly spaced postholes (0.17–0.28m in diameter; 0.08m–0.18m in depth; 1.25–1.70m spacing between posts), filled with mottled brownish-grey clayey-silt, occasionally flecked with charcoal (Fig. 5.12). The only artefact recovered was from F.443, which yielded a large fired clay spindle whorl. Overall, the post-ring had a diameter of just 4.95m, but was surrounded by three satellite post settings (0.18–0.30m in diameter; 0.09–0.18m in depth), equidistantly positioned around the circuit. These displayed identical fills and presumably marked the external wall-line of the building. The overall footprint was therefore 6.90m in diameter and whilst symmetrical in layout, displayed no obvious entrance setting. The Late Bronze Age ancestry of the roundhouse was confirmed by single radiocarbon determination derived from a charred seed in F.433 (see below). This returned a date of 900–800 cal BC (Beta-205538: 2680±60 BP).

Immediately adjacent to the roundhouse, and seemingly abutting the external wall-line, was pit F.433, accompanied by a further outlying posthole F.491: both of which may have been directly associated with the structure. The pit was a shallow rectangular cutting (1.50m long; 0.53m wide; 0.19m deep), filled

with a single deposit of mid-grey silty-sand. Mixed within this soil matrix were two worked flints and 55 plain sherds (279g) of Late Bronze Age-type pottery, the varied fabrics of which suggest a minimum of eight vessels were represented. However, no further contemporary features were located within the vicinity of the roundhouse, with the nearest (posthole F.710) laying some c. 50m to the southwest of the building.

Even further afield were the two four-post structures: the only other buildings identified (Fig. 5.13). These were located along the northern edge of the excavation, on a slightly flatter area of the terrace between the 2.0 and 2.2m contours. Positioned adjacent to one another and sharing the same northeast–southwest axis, these two sub-square structures were very similar in plan: the average dimensions being 3.00m by 2.90m for Four-post Structure 1 (posthole range: 0.33–0.47m in diameter; 0.16–0.30m in depth) and 2.80m by 2.75m for Four-post Structure 2 (posthole range: 0.23–0.40 in diameter; 0.12–0.24m in depth). The post settings were mainly filled with mid-grey silty-clay, though postholes F.35 and F.384 in Structure 2 had charcoal-rich bands in their upper profile. F.384 yielded two fragments of burnt animal bone (11g), with a further piece (7g) deriving from F.383 in the building. Another scrap of calcined bone (1g) was also recovered from F.379 in Four-post Structure 1, whilst a piece of fired clay (31g) was found in F.381 (alongside eight residual sherds of Neolithic pottery (48g)).

Given that none of these finds are of definite Late Bronze Age attribution, the dating of these structures is far from secure. That said, on the basis of form alone, the buildings are clearly of later prehistoric origin and in light of the fact that no Early Iron Age features were encountered above the 2.0m OD contour at Bradley Fen, a Late Bronze Age date seems the more likely. Of course, a Middle Bronze Age origin cannot be completely ruled out, but since posthole F.382 abutted the tertiary fills of an adjacent waterhole of this period, the structure can almost certainly be regarded as later (given some level of truncation, the posthole may have originally cut these upper silts). Details aside, it is striking how the alignment of these structures were sympathetic to the wider axis of the former Middle Bronze Age field ditches, just as the contemporary waterholes were along the lower contours. The same is also true of Roundhouse 4, which was neatly located in the southern corner of a once ditched paddock (Figs 5.11 & 5.12). This again serves to illustrate how an earlier grain in the landscape was still important in conditioning the layout of some settlement features well into the late second and earlier first millennium BC at Bradley Fen: a pattern which was not carried forward into the Middle Iron Age (see Chapter 6).

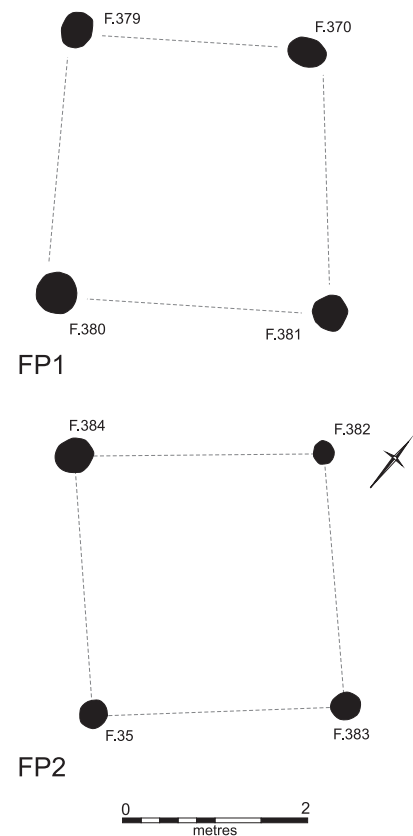
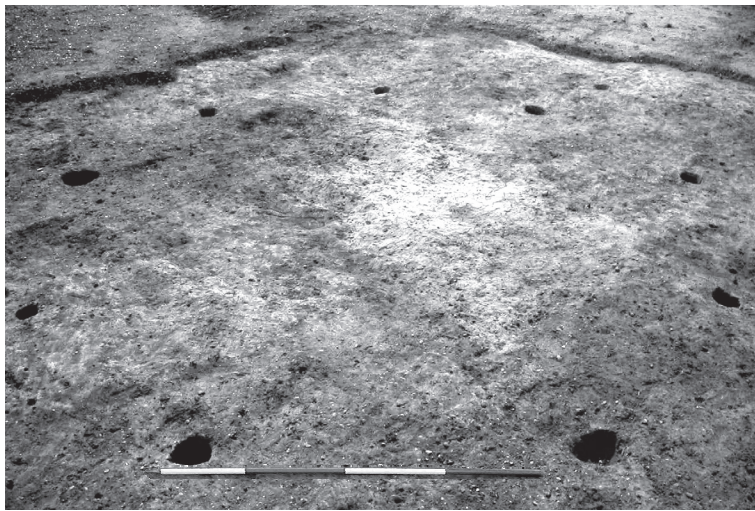
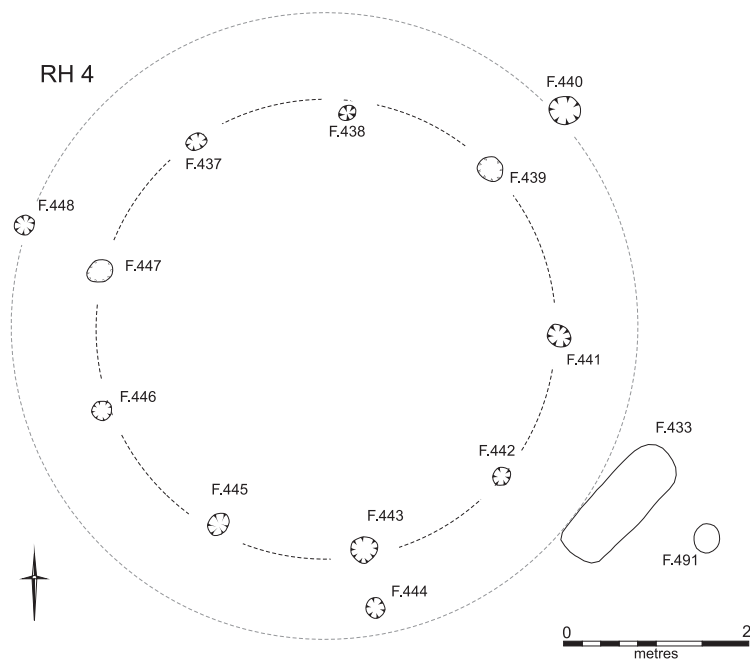


Figure 5.13 (above). Four-Post Structures 1 and 2.

Figure 5.12 (left). Roundhouse 4 and adjacent features.

Other features

Only six other features above the 2.0m contour were assigned to the Late Bronze Age: four isolated post-holes (F.280, F.335, F.710 and F.712) and three pits (F.690, F.691 and F.698). Of these, three warrant further description.

The first is F.280, a circular posthole-type feature with a U-shaped profile measuring 0.40m in diameter, 0.40m in depth and filled with a mid-brown silty-clay. The cut was lined with burnt stones and 23 plain body sherds of Late Bronze Age pottery (177g), derived from a single shell-tempered vessel. Above, two very different but complete loomweights had been stacked in the centre of the posthole: one, rectangular

in shape, with a single perforated hole; the other more bun-shaped, with two perforations perpendicular to one another (Fig. 5.14). Whilst the finds from the base could constitute post-packing, the loomweights should be considered a further example of a placed deposit, similar to the semi-complete vessels from the waterholes. In this instance, these were interred after the post had been removed. However, understanding what these acts related to, or how this isolated post functioned, is nigh on impossible. Indeed, all that can be said is that these finds attest to weaving taking place at the site, complementing the evidence for textile production hinted at by the spindle whorl recovered from Roundhouse 4.

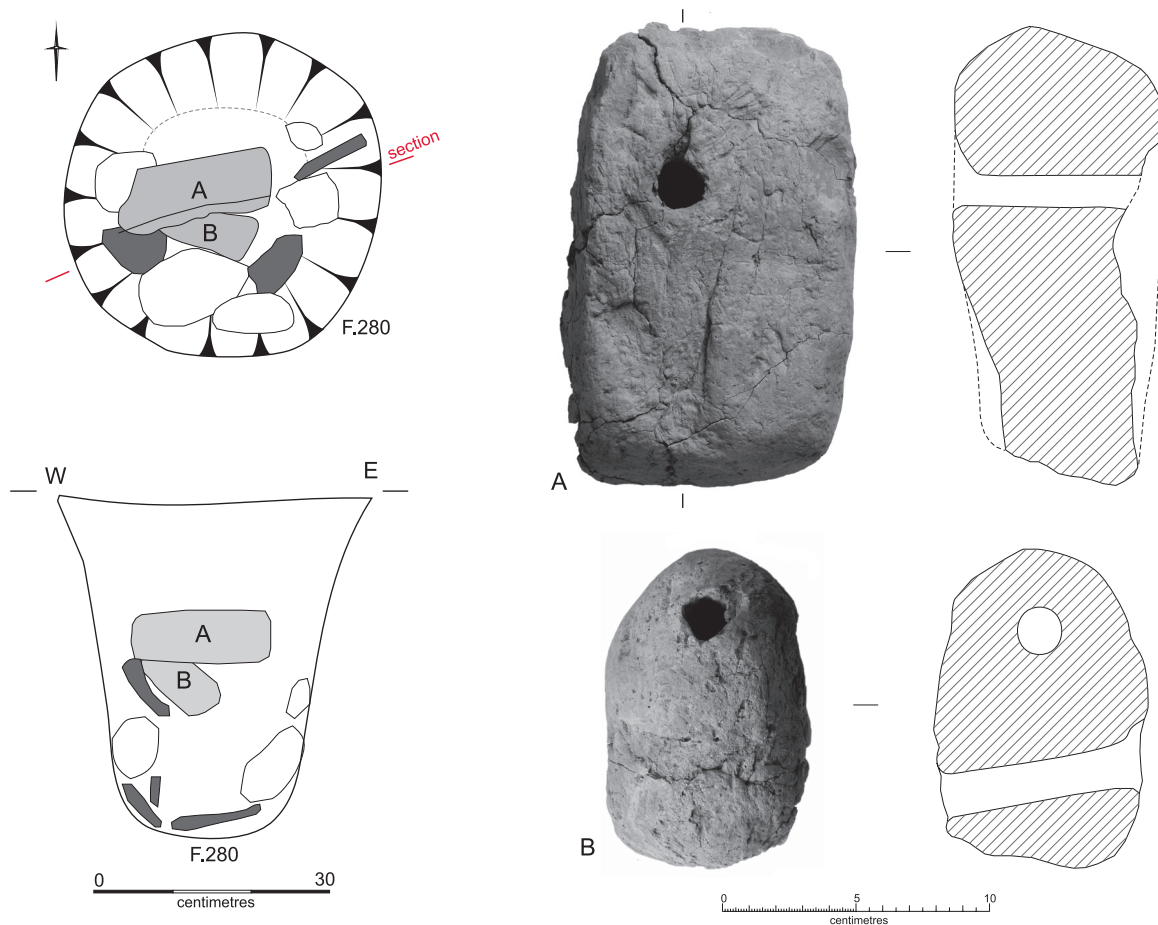


Figure 5.14. Plan and section of posthole F.280, with photographs of the two complete loomweights recovered.

The second and third features of note were two intercutting pits, F.691 and F.698, located at the centre of the site. F.691 was a relatively large, steep-sided pit with a concave base (1.85m long; 1.25m wide; 0.79m deep), not unlike some of features on the damp-ground contours. The fill sequence, however, reflected its dryland setting on the terrace and was characterized by bands of gravel-rich sandy-silts. More importantly, this feature had truncated an earlier pit, F.698, which contained a crouched inhumation at its base. Very little of the original pit survived on southwest side of F.691, though here the lower legs and feet of the body remained *in situ*.

The date of this burial is uncertain, making it difficult to judge the duration between the interment of the body and the cutting of F.691 – the burial potentially being of earlier Bronze Age origin. Nonetheless, it was evident that this grave was recognized during the original digging of F.691, since some of the disturbed bones were regrouped and stacked on the base of the cut (Fig. 5.15). Accompanying these was an unusual

miniature pottery vessel, whose general form and fabric affinities would suggest a Late Bronze Age date. The question remains whether this was contemporary with the cutting of pit F.691, perhaps being placed alongside the reassembled bone in some act of appeasement, or whether it was originally a grave good.

Discussion – the character of the Late Bronze Age settlement remains

The imprint of Late Bronze Age settlement at Bradley Fen is very slight and scarcely more visible than that of the preceding period. Even allowing for the fact that Roman quarrying may have destroyed further features on the crown of the terrace, the overall impression is one of widely dispersed structures scattered throughout a landscape still partitioned along lines previously inscribed by ditches in the mid second millennium BC. In terms of the suite of features represented, there is nothing especially unusual about these settlement remains, except for their degree of dispersal. Elsewhere in Cambridgeshire, Late Bronze Age open settlement

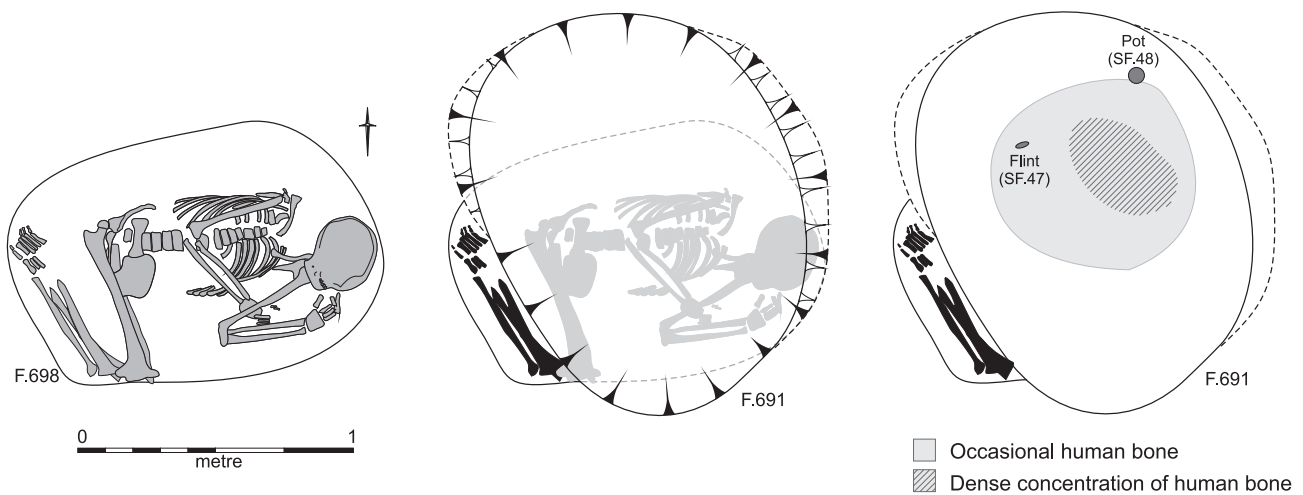


Figure 5.15. Reconstruction of the pitting sequence (from left to right) and the disturbance of the burial in F.691 and F.698.

F.691 and F.698: the human remains (Natasha Dodwell)

The skeleton (adult; ?male; height: c. 1.72m (5'8")) was severely truncated. Only the lower legs and feet survived *in situ* in F.698, the right lying directly on top of the left. This suggests that the body would have been placed in a crouched position on its left side, orientated either east–west or southeast–northwest depending on how flexed the body was. At the base of pit F.691, which cut the skeleton, was found a large quantity of human bone (rib fragments, 15 vertebrae, a left humerus and clavicle, left ischium, right ulna and four right metacarpals) which although not articulated, had been deliberately grouped/stacked. There were recent and old post-mortem breaks amongst the remains and concretions of iron panning.

A well-healed transverse fracture, marked by a smooth callous was recorded on the mid shaft of the left ulna. Schmorl's nodes were recorded on the surviving lumbar and lower thoracic vertebrae and eburnation and osteophytes were observed on the articulating facets of the cervical vertebrae. Human bone, more carelessly deposited, was recovered through the basal gravel fill of F.691 which covered the stacked remains. The elements retrieved included fragments of rib, right scapula, a very small fragment of left mandible, a fragment of parietal and the left maxilla with all eight teeth lost post-mortem. An external draining abscess, measuring 10mm, was recorded above the second premolar.

is typically more focused and speaks of both longevity in occupation and an intensity of activity at particular locales. This is distinctly lacking from the signature at Bradley Fen and suggests we are not looking at a settlement 'core' *per se*, but rather structures and the traces of occupations which were more intermittent or less intensive.

Given the light footings of Roundhouse 4 and the scarcity of surrounding features, it could be the case that this building was subsidiary to an external settlement 'hub': a structure to be used whilst livestock

grazed the terraces and rich pastures of the damp-ground contours. Buildings such as this may only have been occupied for a few weeks or months of each year, perhaps by a handful of individuals charged with overseeing the seasonal movement and grazing of animals. Shelters or other light buildings (possibly four-post structures for storage?) would certainly have been required and worth investing in for this task, especially if these forays formed part of a yearly roll call of duties in the agricultural cycle. The impermanence of residency would also help explain the paucity of

finds directly or indirectly associated with the building, or indeed the use of other contemporary features at Bradley Fen. In other words, in circumstances where only a few artefacts may have been brought onto the site and used by a small sub-set of the community, we should anticipate things being broken and deposited much more infrequently.

Early Iron Age settlement and structural remains – the archaeology of the dry terraces at King’s Dyke

Compared to the extensive but low density scatter of features at Bradley Fen, the linear swathe of Early Iron Age pits and structural remains at King’s Dyke present a more complete, if somewhat crowded image of later prehistoric open settlement (Fig. 5.16). Whilst this impression is partly shaped by the corridor-like excavation footprint, which cuts a relatively narrow transect across the site, there can be no denying the aggregated nature of the settlement with a total of 10 roundhouses uncovered. The picture is therefore far from complete, but since the site straddles the same range of contours to those occupied by the Late Bronze Age features at Bradley Fen, it offers an opportunity to compare the changing signature of settlement in this landscape zone.

Roundhouses

From even a cursory examination of the site plan, it is immediately apparent that there are marked contrasts in the architectural footprint of roundhouses at King’s Dyke. These 10 circular buildings were variously defined by post-rings, wall-trenches and/or heavy-set doorway structures. All were truncated to differing degrees, with no traces of floors surviving. Some still presented entire ‘pristine’ ground plans

whilst one or two were represented by no more than an arc of postholes or a short line of wall-trench. Others comprised a more chaotic arrangement of postholes, attesting to repairs, internal partitions/interior fixtures or even phases of activity unconnected to the buildings. Equally, there were differences in the size and orientation of the roundhouses, with at least one being small enough to be appropriately labelled an ancillary structure (Table 5.1).

Despite this variability, these buildings can be usefully divided into three principal groupings, based on the architecture of their wall-lines and entrance settings. Importantly, these categories are not just devised with convenience in mind. As will be teased out below, there are crucial details shared by some buildings in these groups, which allow us to identify hallmarks in roundhouse construction techniques. This not only enables a discussion of architectural traditions in this context, but helps to establish connections between buildings, facilitating efforts later on in this chapter to model the development of the settlement.

Buildings defined by a wall-trench – Roundhouses 5, 6 and 10

Roundhouses 5, 6 and 10 were defined by narrow penannular wall-trenches (Fig. 5.17). The best preserved were Roundhouses 5 and 10, particularly the former, which displayed a pristine and visually spectacular ground plan, comprising a wall-slot and external ring of evenly spaced postholes. At the other end of the preservation spectrum was the adjacent structure Roundhouse 6, the footprint of which was heavily truncated, surviving as a short arc of wall-trench and a scatter of shallow postholes. Each of these buildings is described in order of their preservation (from truncated to pristine) below.

Table 5.1. Roundhouse characteristics and finds totals. BF = Bradley Fen; KD = King’s Dyke.

Roundhouse	Date	Site	Diameter	Pottery	Bone	Fired clay	Flint	Worked stone	Burnt stone
4	LBA	BF	6.90m	-	-	1 (47g)	-	-	-
5	EIA	KD	8.45m	244 (1829g)	208 (1040g)	50 (1159g)	8	7 (760g)	c. 0.8kg
6	EIA	KD	c. 7.50m	1 (2g)	9 (7g)	-	2	-	-
7	EIA	KD	8.50m	4 (7g)	5 (11g)	-	5	-	<0.1kg
8	EIA	KD	8.50m	12 (57g)	14 (41g)	1 (18g)	1	-	c. 2.2kg
9	EIA	KD	8.30m	7 (52g)	92 (583g)	1 (1g)	13	-	-
10	EIA	KD	8.30m	16 (36g)	7 (9g)	3 (4g)	1	1 (1406g)	c. 6.9kg
11	EIA	KD	4.40m	4 (21g)	-	-	-	-	<0.1kg
12	LBA?	KD	7.80m	1 (1g)	-	-	-	-	-
13	EIA	KD	9.60m	1 (2g)	-	-	-	-	-
14	EIA	KD	11.50m	42 (311g)	401 (2033g)	2 (9g)	-	-	-
Total	-	-	-	333 (2318g)	736 (3724g)	58 (1238g)	30	8 (2166g)	c. 10.0kg

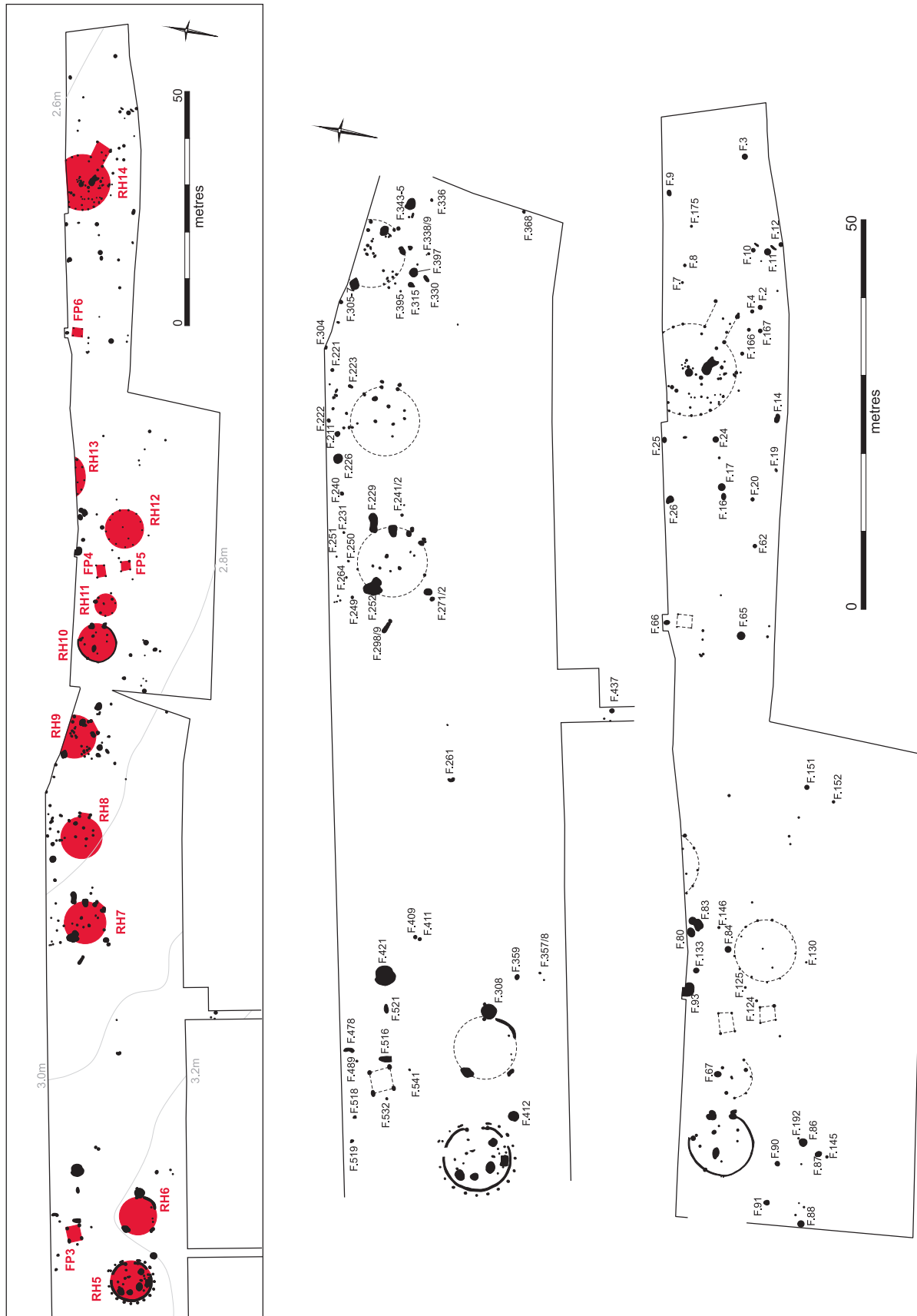


Figure 5.16. Plan of the King's Dyke Early Iron Age settlement. The only features which may be of Late Bronze Age origin are Roundhouse 12 and pit F.84.

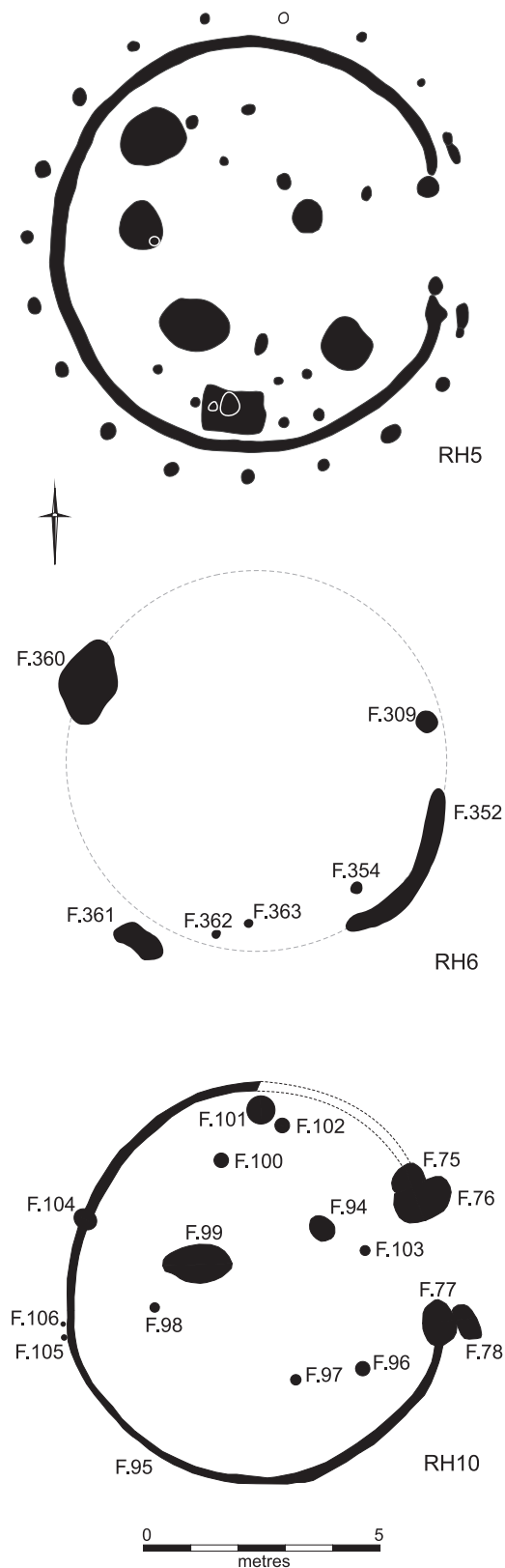


Figure 5.17. Plan of roundhouses defined by a wall-trench.

Roundhouse 6

The truncated remains of roundhouse 6 lay just above the 3.2m contour, at the western end of the settlement swathe. The perimeter of the building was marked by a 3.7m long stretch of surviving wall-trench (F.352; max. width 0.44m; depth 0.33m), the projected circuit of which had an internal diameter of 7.50m. The entrance appears to have been on the eastern side of the building, as defined by the northern terminal of F.352 and posthole F.309: the doorway width being 1.20m. The existence of a porch structure is also implied by the position of posthole F.340, set opposite F.309.

The only surviving interior features in the structure were three small postholes, F.354, F.362–63 (diameter range, 0.12–0.67m; depth range, 0.05–0.18m), located close to the southern arc of the projected wall-line. Towards the rear of the building was pit F.360; a shallow and somewhat irregular feature (0.80m in diameter; 0.20m deep) with a charcoal-flecked fill. This was located on the path of the projected wall-line and may therefore pre- or post-date the structure. Alternatively, both this feature and F.361 – a similarly irregular pit lying on the fringes of the structure (0.51m in diameter; 0.15m deep) – may be interpreted as hollows forming along the exterior wall-line. In terms of artefacts recovered, the structure and its associated features yielded very few finds. Small fragments of animal bone were recovered from F.309 and F.340 (9 fragments, 7g), whilst the latter also yielded a single sherd of pottery (2g). The only other finds were two worked flints from F.361 and F.363.

Roundhouse 10

Roundhouse 10 was situated in the centre of the settlement swathe, 115m west of Roundhouse 6. Unlike the other buildings, which were only revealed once the buried soil had been stripped from the surface, the outline 'ghost' of Roundhouse 10 was identified during the removal of this horizon. Consequently, it was possible to conduct a controlled excavation of the lower profile of the buried soil within the interior of the structure. This was achieved by hand digging eight alternate 2.5m squares of the deposit across a 10m × 10m chequerboard style-grid.

No traces of a laid floor or other sub-soil features were encountered in these investigations. Perhaps more surprisingly, the recovered finds totals were remarkably low; just eight artefacts: three small sherds of pottery (7g), three fragments of calcined bone (6g), a single worked flint and one piece of burnt stone (Fig. 5.18). This equates to just one artefact per grid square excavated or 0.4 finds per metre. In addition, the floated samples from the squares produced only a background of wild seed species and a single rachis fragment.

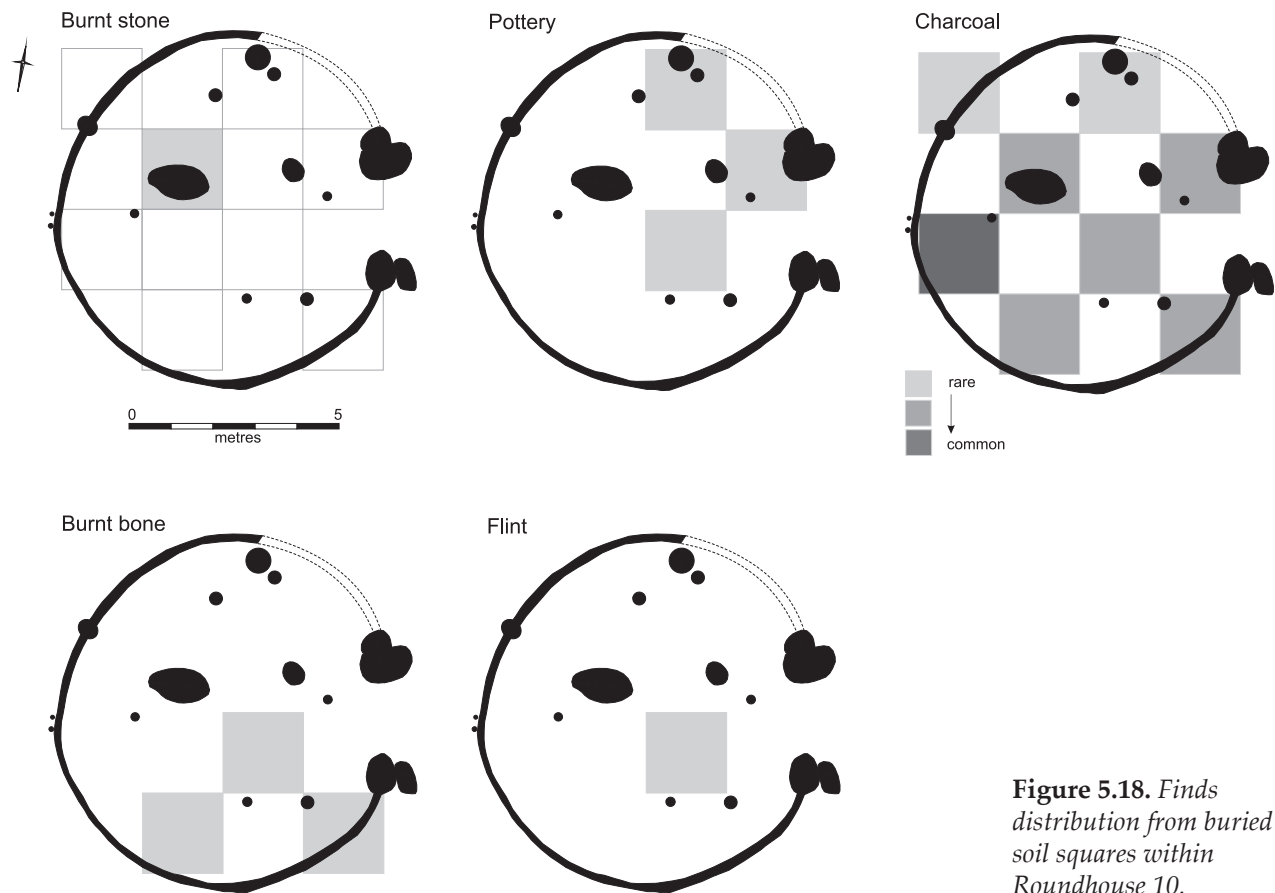


Figure 5.18. *Finds distribution from buried soil squares within Roundhouse 10.*

Charcoal, by contrast, was reasonably abundant, being found throughout the interior. Given the overall finds frequencies and the lack of any obvious patterning in their distribution, it is hard to make meaningful observations. All that can be concluded is that the interior of the building appears to have been kept free of material refuse, both prior to and after its abandonment.

The ground plan of Roundhouse 10 was defined by a shallow penannular wall-trench with an east-facing entrance marked by four fairly robust postholes (doorway width 2.0m). The circuit of the wall-trench, F.95 (width range, 0.14–0.24m; depth range, 0.04–0.15m), was largely intact, with an internal diameter of 8.3m. At the rear of the structure, its line was cut by posthole F.104 and further flanked by two close-set stake holes, F.105 and F.106, settings which may represent a repair to the wall. More direct evidence for the replacement of structural components was found at the entrance. This was initially defined by postholes F.75 and F.78 (0.19–0.21m in depth), later recut by F.76 and F.77. These secondary pit-like post settings were more deeply footed than their predecessors (0.53–0.59m in max. diameter; 0.31–0.40m in depth), though none retained traces of post-pipes.

Nine internal features were identified within this roundhouse, comprising three pits (F.94, F.99 and F.101) and six postholes. Like all features associated with the building, these fixtures were filled with grey silty-sand, mottled to varying degrees by patches of pale clay and gravel. Of note is the central diamond-shaped arrangement of postholes, formed by F.97–98, F.100 and F.103. This is thought to be a key architectural component of the structure and, more significantly, is mirrored in the ground plan of Roundhouse 5 (see below). The imprint of these two buildings is further connected by the presence of single ‘cooking’ pits, located just inside the doorway of the structures, directly opposite the northern entrance posts. In Roundhouse 10, this feature comprised a small, shallow clay-lined pit, F.94 (0.57m in diameter; 0.13m deep), which yielded 8kg of burnt stone including a broken fragment of a saddle quern. Beyond this, there were no other concentrations of artefacts in the features. Most did yield finds, but these often comprised single scraps of pottery (13 sherds, 29g in total from the structure), animal bone (4 fragments, 3g), fired clay (2 fragments, 4g) or single burnt stones (391g in total).

Roundhouse 5

Roundhouse 5 was the most elaborate building in its class (Fig. 5.19), located at the western edge of the settlement swathe, immediately behind Roundhouse 6. The structure was defined by a wall-trench (F.441, internal diameter 8.45m), surrounded by a concentric post-ring with 19 surviving postholes (F.458–73). The interior wall-line slot consisted of a narrow, vertically sided trench (0.20–0.30m in diameter; 0.15–0.30m in depth) with two breaks along the circuit: one marking the building's main east-facing doorway, measuring 1.70m in width and flanked by two deeply footed entrance posts (F.474 and F.475, 0.40m in diameter and 0.40m deep); the other being to the southeast and forming a second entrance measuring 1.25m wide. Filled with yellowish grey-brown sandy-silt, the trench revealed the occasional discrete post impressions at its base (0.15–0.25m in diameter), suggesting the cut acted as a footing for closely spaced or abutting uprights. The character of this feature altered towards the eastern entrance, 'flattening' in plan and becoming notably shallower. This attribute served to accentuate the building's main entrance, creating a flat facade. Of note is the depression in F.441 just south of entrance post-F.475, which may represent repair to the doorway.

Elements of the external post-ring also added to the enhancement of the eastern entranceway. The post circuit measured 9.75m in diameter north–south and 9.00m east–west. Seventeen circular postholes surrounded the perimeter (F.456–72; diameter range, 0.25–0.30m; depth range, 0.15–0.35m), spaced on average 1.20m apart, with two elongated oval-shaped footings set opposite the entrance (F.455 and F.473; 0.40–0.50m in length; 0.25m in width and 0.15–0.25 in depth). The alignment of the latter accentuated the building's facade, creating quite an elaborate externally splayed doorway structure.

Internal fixtures and finds

Twenty features were identified within the interior, including 13 postholes (F.442–54; diameter range, 0.18–0.38m; depth range, 0.11–0.31m) and seven pits (F.488, F.495–96, F.501, F.523, F.525 and F.529). The postholes formed part of four interior fixtures: a small four-post structure (F.451–54); a two-post structure (F.449 and F.550); an arching partition (F.442–45); and a central diamond-shaped setting of structural supports (F.446–48), which either utilized posthole F.445, or another cutting opposite the entrance, removed by the Roman boundary ditch. This fixture would have created an identical setting to that in Roundhouse 10, with posts set between 3.20 and 3.40m apart.

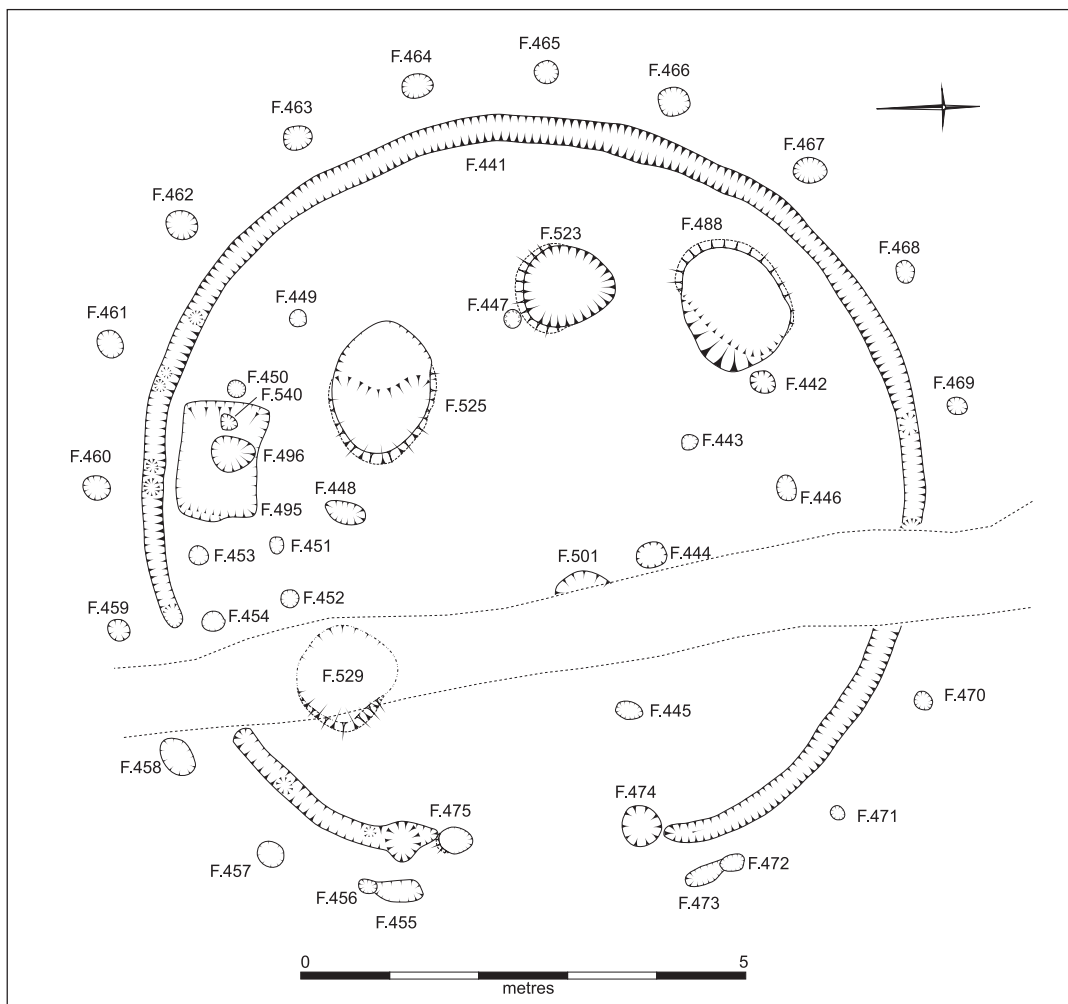
The four-post and two-post structures were situated either side of rectangular pit F.495, the former

positioned in respect the second 'minor' entrance through the perimeter wall-line. The postholes of this structure were set between 0.50 and 0.75m apart, whilst those of the two-post fixture were spaced at 1.00m. Both shared fills of grey-brown sandy-silts, flecked with charcoal and smudges of burnt clay. Similar types of fill were observed in pit F.495. Box-like in form, this rectangular pit (1.30m in length, 0.90m in width and 0.59m in depth) had near vertical, unweathered sides and a flat base (Fig. 5.20). It had been backfilled with a sequence of alternate bands of relatively clean clays, interleaved with layers of 'dirty' charcoal-rich silt: a seed from the penultimate charcoal-rich lens yielding a radiocarbon date of 520–380 cal BC (Beta-205544: 2370±40 BP).

The pit yielded the structure's largest artefact assemblage, comprising 167 sherds of pottery (1344g), 42 pieces of burnt clay (1059g), 19 fragments of animal bone (40g), various burnt stones (182g) and two heat-cracked fragments of a saddle quern (490g). Most of the pottery was recovered from middle fills of the pit, including numerous refitting burnt or over-fired sherds from three coarsewares jars. Below these and lying immediately above the basal fills, were several lumps of burnt clay. Most of this belonged to a broken and roughly moulded sub-rectangular loomweight or 'clay brick', the surface of which had been repeatedly stabbed by an edged tool. At the western end of the pit, the principal artefact bearing layers had been cut by a circular posthole-sized feature, F.540, measuring 0.18m in diameter and 0.17m in depth. This was filled by another dark charcoal-rich deposit, which had a discrete concentration of pottery and animal bone at its base, together with a further fragment of the quernstone from F.495. The quern (96g) and animal bone (14 fragments, 27g) may have been redeposited, but the pottery was a fresh interment, comprising 35 sherds (225g) from a single large fineware jar, not represented in the earlier feature.

Towards the end of the infilling sequence of F.495, another pit was cut through the fills. F.496 was sub-circular in plan with a U-shaped profile (0.48m in length, 0.38m in width and 0.54m in depth) filled with a charcoal-rich sandy-silt similar to that in F.540. This pit also contained a mix of redeposited finds from F.495, including further pieces of quernstone

Figure 5.19 (opposite). Roundhouse 5. The ditch cutting the structure was of Roman date.



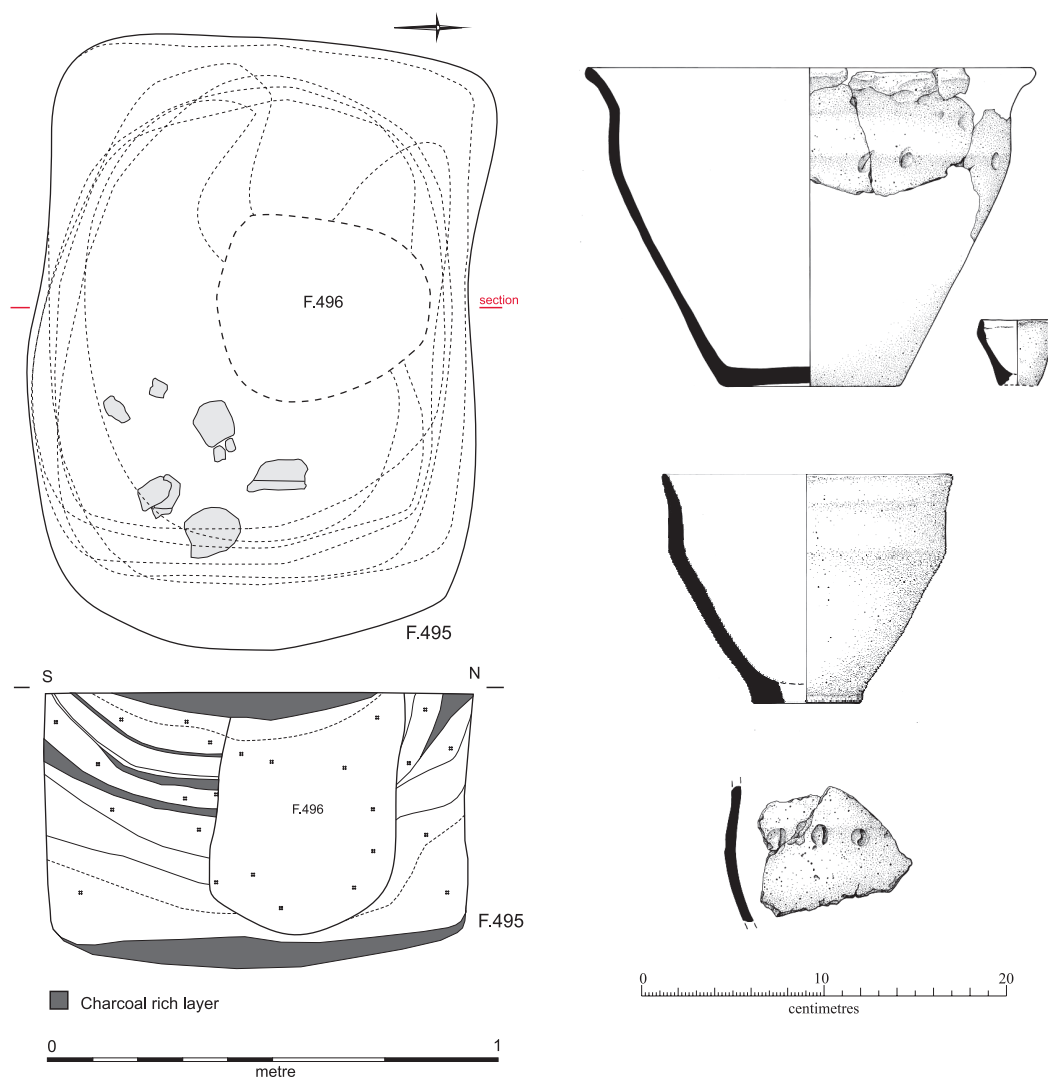


Figure 5.20. Pit F.495. Top left: plan and section of the pit showing banded deposits and recuts (F.496 and F.540). Top right: selection of semi-complete vessels recovered from F.495 and F.496. Bottom: photograph of the banded deposits.

(190g), animal bones (102 fragments, 98g), fired clay (4 pieces, 78g) and pottery (10 sherds, 62g), some of which refitted to material from the context cut below. However, like F.540, there was also a newly placed deposit at the base of the pit, this time comprising a group of partially articulated lamb bones accompanied by a semi-complete cup.

In total, the sequence of deposits and recuts connected to F.495 yielded a substantial artefact assemblage. On the one hand, this can be seen as a reflection of the likely range of activities occurring within the roundhouse, with a particular emphasis on food preparation and consumption. On the other, there are indications in the way these things were treated, that careful consideration was given to their selection and ordering in the ground. In terms of material choice, the inclusion of semi-complete pots and dumps of animal bone certainly resonate with patterns of formal deposition in the waterholes at Bradley Fen. Here though, the reiterative character of these acts seems to have been particularly important, with one specific spot in the roundhouse serving as a focus for these deposits. Whilst it is hard to pinpoint the motivation for such acts, given there is a sequence of deposits, it is tempting to view each interment as marking a particular moment within the history of the structure, or the lives of the inhabitants. Perhaps more importantly these practices are echoed elsewhere at King's Dyke in Roundhouse 14, where there are hints that lamb bones were interred during both the foundation and abandonment of the structure (discussed below).

In comparison to the artefact-rich deposits from F.495, F.496 and F.540 the remaining pits in Roundhouse 5 were comparatively 'quiet' in terms of finds: just 12 sherds of pottery (64g), 22 scraps of animal bones (8g), 4 worked flints and a few pieces of burnt stone (394g) recovered between them, with no finds from F.488 or F.529 (Fig. 5.21). F.501 was a small, heat-reddened 'cooking pit' (0.53m in diameter, 0.15m deep) located opposite the entrance, in an identical position to that in Roundhouse 10 – another fixture connecting these structures. The remaining internal pits were oval-shaped storage features (length range, 1.05–1.50m; width range, 0.73–1.15m; depth range, 0.34–0.64m), each with one or two deposits of orangey-brown to mid-grey sandy-silts. Although not all of the pits may have been open at the same time, contemporaneity with the roundhouse is implied by their distribution towards the perimeter of the interior and also by the survival of their overhanging profiles. This characteristic in particular indicates that the pits were dug, used and backfilled in a sheltered environment, since similar features outside the structure consistently show weathered bowl-shaped profiles.

Their shape also implies that the interior of the pits were lined or supported in some way, as it is hard to otherwise account for why the sides had not collapsed from footfall above. It certainly seems likely that they would have been lidded, given the hazard of having open features of this magnitude in the structure, not to mention the fact that F.529 would have blocked the second southern entrance.

Details aside, the number of pits from Roundhouse 5 and in particular, the recuts, deposits and artefacts within F.495, speak of a history of inhabitation with some degree of time-depth. Interestingly, this is not otherwise immediately apparent from the pristine architectural footprint of the building, which shows only one possible repair to the entrance. Indeed, without these internal fixtures and finds it would be easy to interpret this roundhouse as a relatively short-lived structure. Still, even if the task of further detailing how this building was actually used/maintained during its life remains a challenge too far with evidence at hand, some insight is provided by a phosphate survey (conducted by Paul Middleton) and distributional analysis of charred macro-fossils and other heavy-residue finds from the processed samples.

The phosphate plot demonstrates some subtle variations in the values achieved for the roundhouse interior (Fig. 5.21). Whilst there are few obvious patterns in this distribution, in relative terms, there is a swathe of slightly higher values associated with the rear of the structure and the area immediately inside the two eastern doorway posts. These seem to relate in part to the location of the structure's four main storage pits, although it is notable that the central zone, home to hearth/'cooking pit' F.501, was characterized by low values. These trends are difficult to read. However, they could imply that small scraps of refuse or other phosphate-rich waste sometimes gathered in these marginal zones, or became trampled into the floor here. By contrast, the central area, which presumably served as the focus for activity (benefiting from light directed from the hearth and doorway), was probably swept free of detritus on a regular basis, hence the lower values.

This interpretation finds some support from the distribution of charred macro-fossils and other small heavy-residue finds (Fig. 5.21). Here, behind the obvious bias towards the pits, finds from the wall-trench at the back to the structure are reasonably prolific, with concentrations also in the entrance postholes. These patterns mirror those from the phosphate survey, again implying that scraps of refuse and other small pieces of debris accumulated in the darker spaces behind the doorway and along the rear wall-line: spaces where small things could enter the ground via gaps between the walls/posts and their footings.

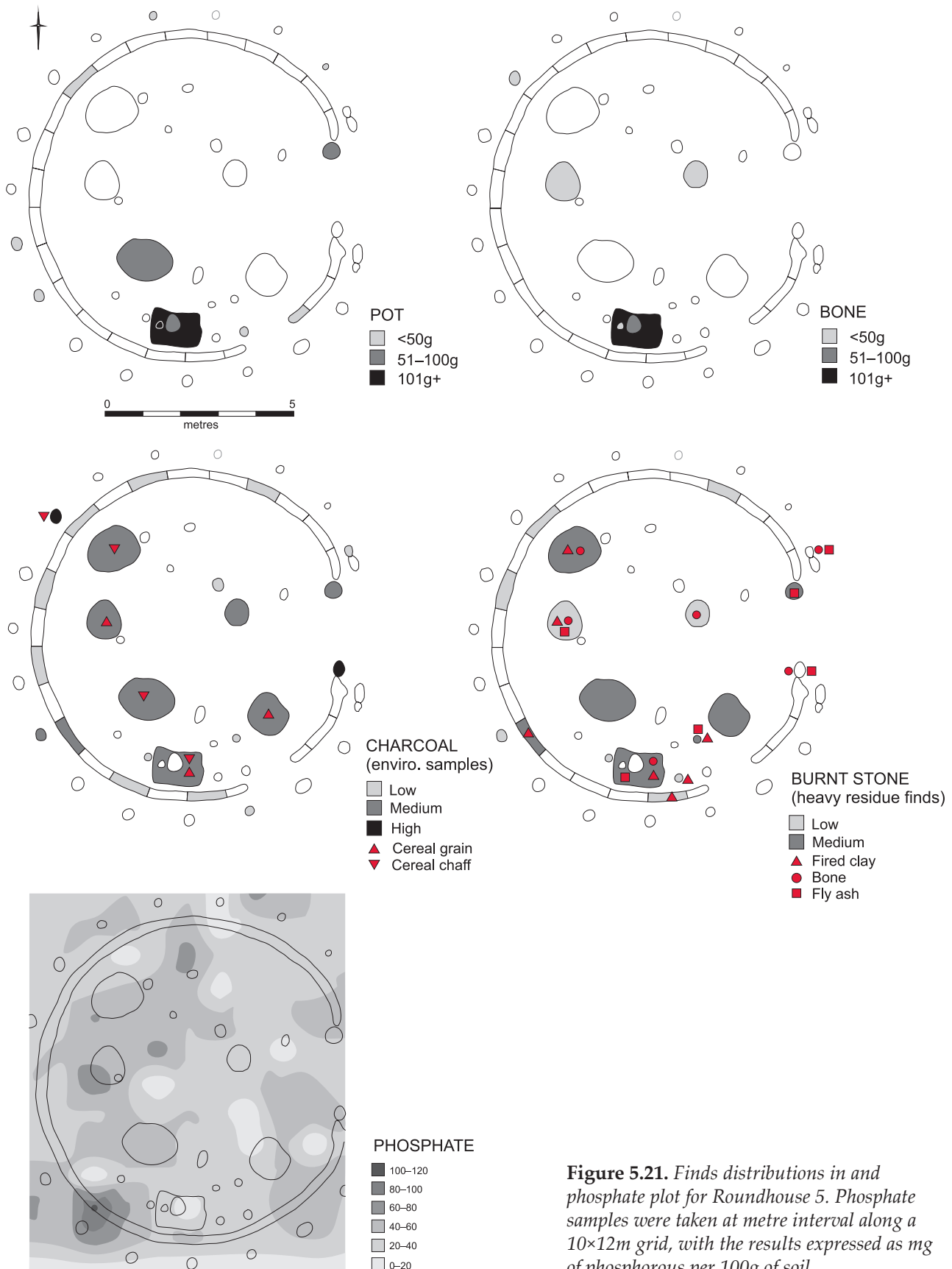


Figure 5.21. Finds distributions in and phosphate plot for Roundhouse 5. Phosphate samples were taken at metre interval along a 10×12m grid, with the results expressed as mg of phosphorous per 100g of soil.

Buildings defined by post-rings – Roundhouses 11, 12, 13 and 14

Located at the lower end of the excavated terrace between 2.6 and 2.8m OD, the four easternmost roundhouses at King's Dyke were all defined by post-rings (Fig. 5.22). The buildings varied in size and construction technique, with the two largest roundhouses (13 and 14) possessing double post-ring circuits. These were only partially exposed in the excavation area, whereas Roundhouses 11 and 12 were uncovered in their entirety; Roundhouse 11 being a small ancillary-type structure.

Roundhouse 11

Roundhouse 11 was a small ancillary structure (4.40m in diameter), defined by a semi-circular arrangement of five postholes (diameter range, 0.20–0.40m; depth, 0.25m). F.107 and F.111 were the largest settings and potentially marked the terminals of the structure's circumference, suggesting the building was more akin to an open-sided building than a roundhouse *per se*.

Two other postholes were associated with the structure comprising the recut mid-point posthole F.112, lying equidistant between F.107 and F.111; and F.113, positioned forward from, but axial to, the mid-post and F.109. Symmetrically arranged, this seven post plan appears to have been orientated north-eastwards, although the position of an entrance is far from clear. The fills of the postholes were identical, with each containing dark charcoal-rich silts. Finds from the building were recovered from F.108 and F.110 and comprised four sherds of Early Iron Age pottery (21g), including a fingertip decorated shoulder sherd, as well as a single burnt stone (5g).

Roundhouse 12

The only complete, pristine post-ring-type building uncovered was Roundhouse 12, located 10m east of Roundhouse 11. The post circle was defined by 12 regularly spaced postholes (diameter range, 0.15–0.25m) set, on average, 1.85m apart. This gave the structure a diameter of 7.8m, with an east-facing entrance marked

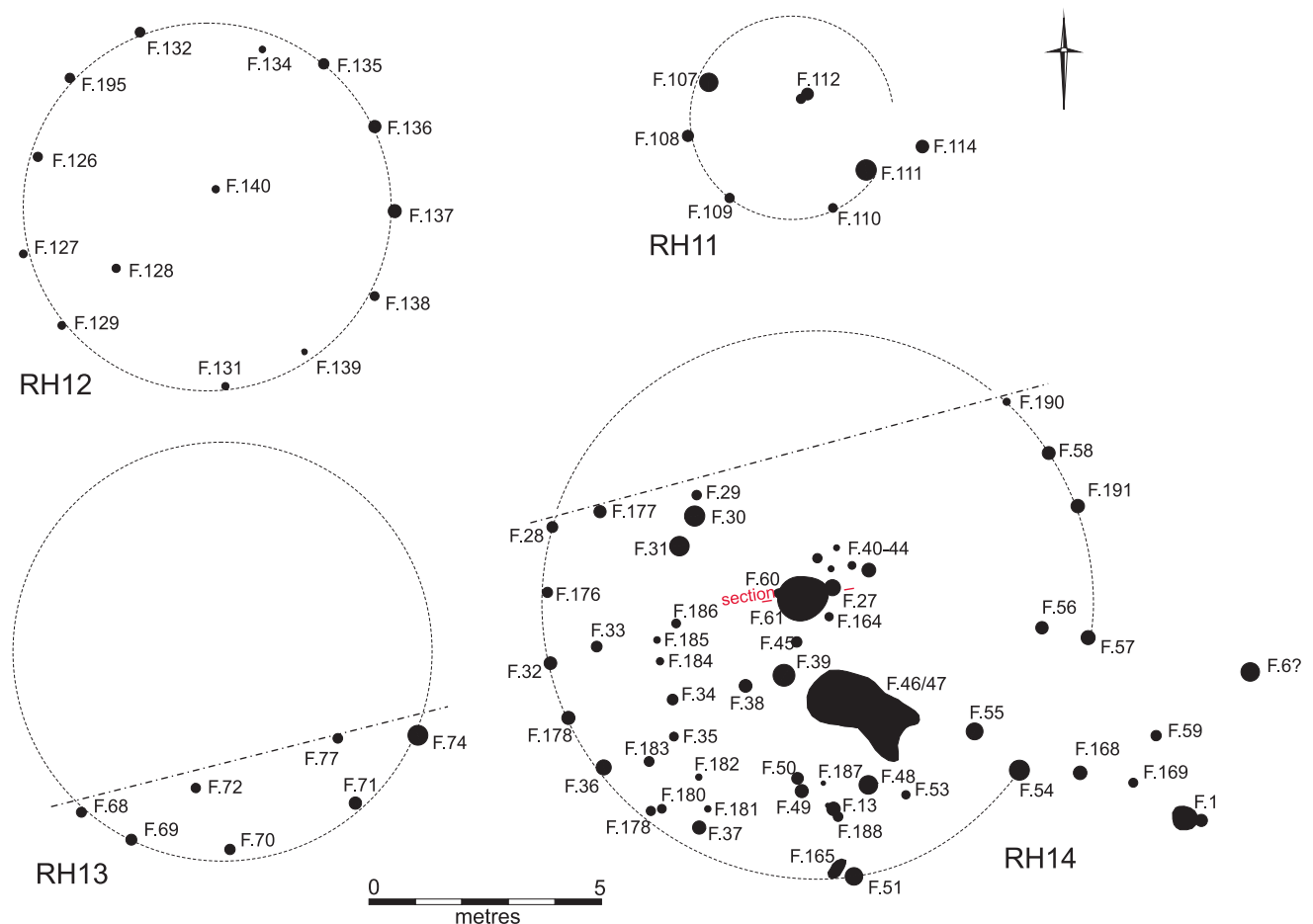


Figure 5.22. Plan of roundhouses defined by post-rings.

by the two largest postholes in the circuit, F.136 and F.137. Two further postholes lay within the interior: the first located near the centre of the building (F.140), the second towards the rear (F.128). Other features possibly connected to the roundhouse included three further satellite postholes, F.125, F.130 and F.147. These were positioned in a triangular setting around the post-ring, similar to the arrangement in Roundhouse 4 at Bradley Fen. However, their alignment was less symmetrical and the spacing more varied. Whilst F.125 and F.130 were both set at an equal distance of 1.60m away from the post-ring, F.147 lay slightly further afield. Alternatively, it is possible that F.147 formed part of a porch structure, since it lay directly opposite entrance post F.136 (Fig. 5.23).

Given such ambiguities it is debatable whether all or any of these additional postholes were associated with the structure. That said, the closest parallel for the building still lies with Roundhouse 4 at Bradley Fen, suggesting this could be another example of an isolated Late Bronze Age structure. Unfortunately, a single undiagnostic sherd (1g) from posthole F.132 was the only artefact recovered, making it hard to determine the date. Finds were however retrieved from pit F.84 lying immediately north of the post-ring. This may well have been contemporary with the building, or possibly internal to it, depending on the favoured reconstruction. The pit yielded the crumbled remains of a rectangular loomweight (859g) and 27 sherds (81g) of plain pottery, much of which was burnt. The fabrics were not especially diagnostic, comprising shell and shell-and-flint-tempered wares typical of both the Late Bronze Age and Early Iron Age around Peterborough, although the partial profile of a finely burnished cup, best paralleled in Late Bronze Age or

transitional Bronze Age–Iron Age assemblages, was also present. Combined then, this is certainly a candidate for the earliest pottery group from the settlement at King's Dyke and goes some way to supporting the claim that Roundhouse 12 was the earliest building erected in the structure sequence.

Roundhouse 13

Just over 8m to the northeast of Roundhouse 12 was the southern edge of a third post-ring structure, only partially exposed. The visible section of the building, Roundhouse 13, was defined by an arc of five evenly spaced perimeter postholes, with a projected diameter of 9.60m and two further interior posts, thought to form part of an inner ring (posthole diameters, 0.20m; depths 0.14m). This reconstruction is largely based on the symmetry of the posthole arrangement and the morphological parallels with Roundhouse 14 (described below). Being the largest setting in the outer circuit (0.47m in diameter), posthole F.74 probably marked the southern side of the entrance, suggesting the building faced southeast – an orientation also shared by Roundhouse 14. The only find recovered was a single shell-tempered sherd (2g) from F.68.

Roundhouse 14

With its elaborate southeast-facing porch projection and a double circuit measuring 11.5m in diameter, Roundhouse 14 was the largest and most complex post-built structure revealed at King's Dyke. The structure lay on its own at the far end of the excavation area, just over 50m east of Roundhouse 13. Despite not being fully exposed, and suffering from truncation on its northwest side (explaining the southern bias in the

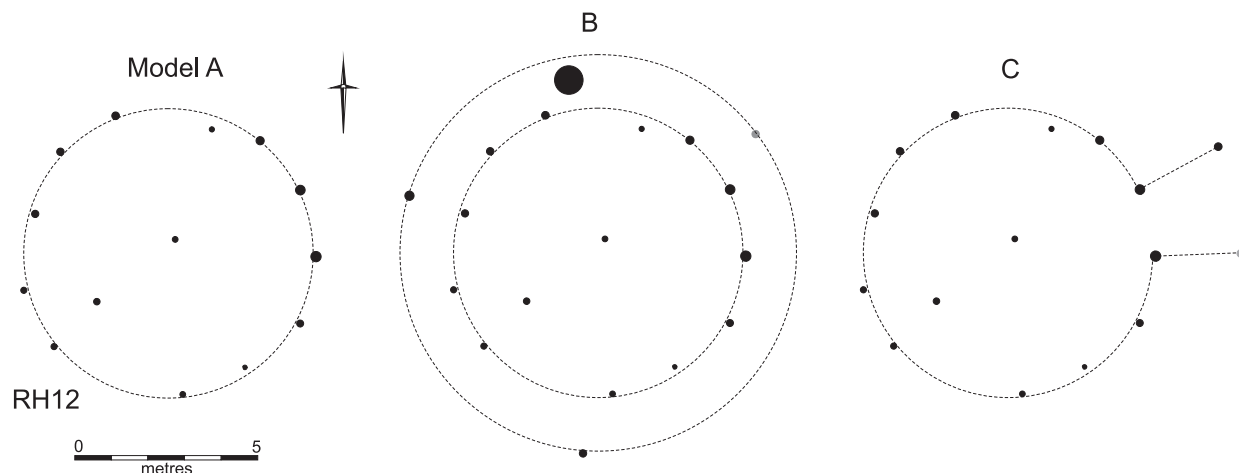


Figure 5.23. Three alternative reconstructions for the plan of Roundhouse 12. Left: single post-ring; Middle: inner post-ring with external post-marked wall-line (similar to Roundhouse 4); Right: single post-ring with porch setting.

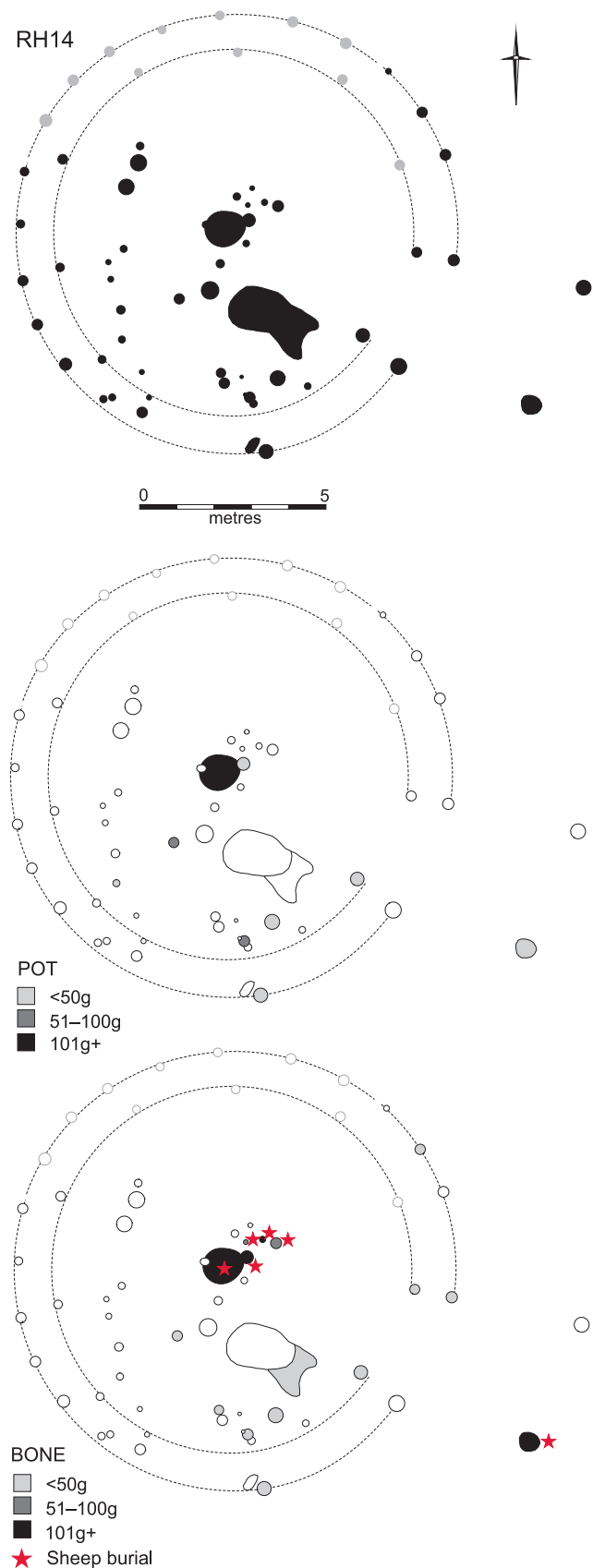
distribution of internal features), the basic structural components of the building can be identified (Fig. 5.24). The uncovered section of the outer ring comprised 14 perimeter postholes (11.50m in diameter), encircling an inner circuit (9.60m in diameter) of at least six surviving structural postholes. The most substantial were the four settings that framed the 2.20m wide entranceway, F.54–57 (diameter range, 0.39–0.47m; depth range, 0.40–0.53m). The outer two of these formed part of the rectangular porch structure (dimensions: 3.75m by 2.85m), whose external footing was marked by a pair of wide but shallow postholes, F.1 and F.6, both under 0.20m in depth. Indeed, similarly shallow cuts characterized the remaining structural postholes in the roundhouse (diameter range: 0.23–0.45m; depth range, 0.08–0.28m).

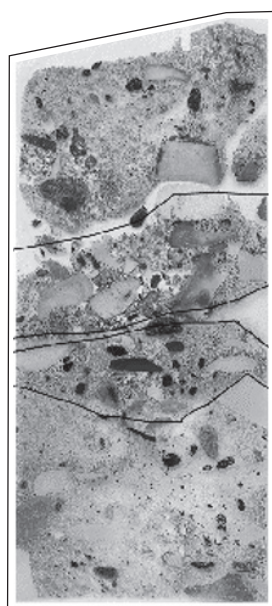
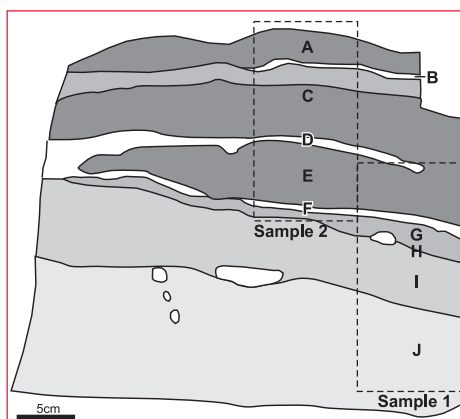
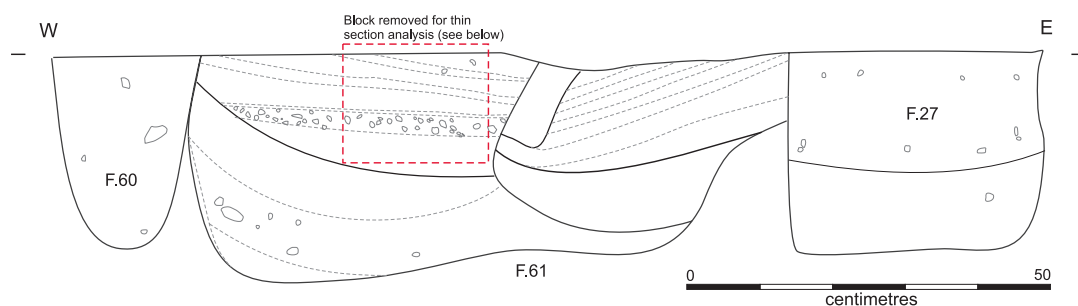
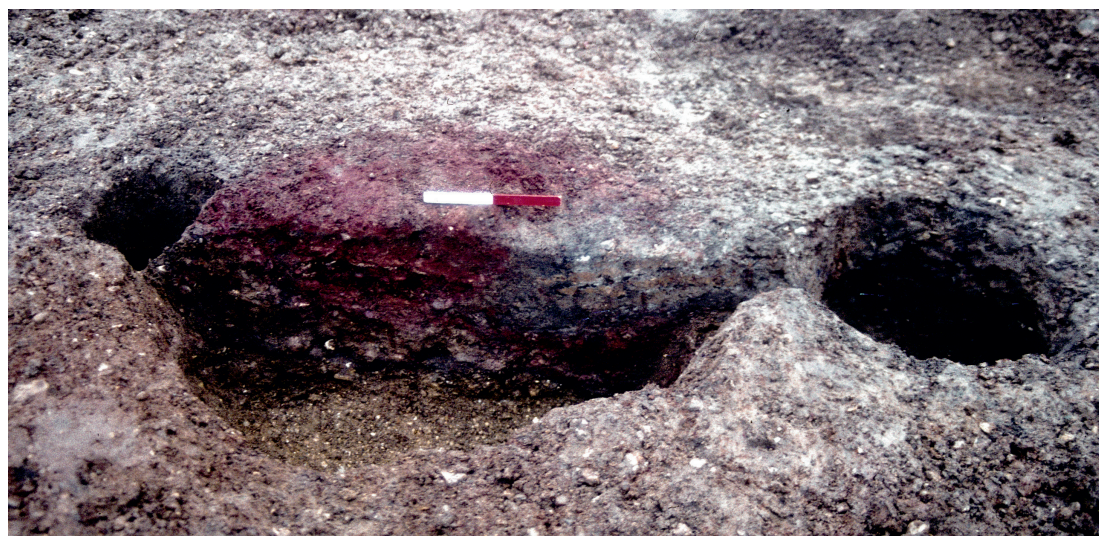
Internal fixtures and finds

A further 32 features were located inside the roundhouse (Fig. 5.22), including four pits (F.30, F.39, F.46, F.61) and 28 other postholes or the bases of truncated posthole-like pits. Some of these features, such as F.180, perhaps represent repairs to the wall-line, whereas others, including the three postholes located within the porch structure (F.59 and F.168–69), may be unconnected to the building. Most, however, displayed similar dimensions to those in the double post-ring, with comparable fills of grey silty-clay flecked with charcoal (diameter range, 0.10–0.45m).

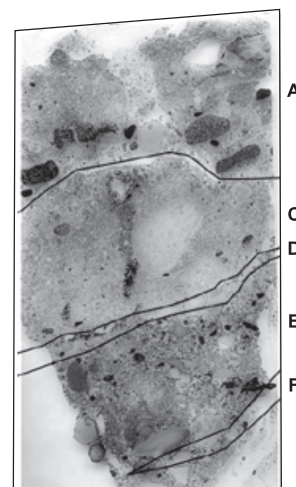
Despite the rash of postholes, there were no obvious fixtures akin to the four-post setting or the screen-like partition identified in Roundhouse 5. Nevertheless, there was cluster of features towards the middle of the building, central to which was F.61 (0.98m in diameter and 0.32m in depth), thought initially to be a hearth rake-out pit. The pit had steep unburnt sides and an undulating base. It was recut

Figure 5.24. Model of Roundhouse 14 as ‘complete’ and plot of artefact distributions. Based on the uniform spacing of the postholes on the western side of the perimeter (each set around 1.15–1.20m apart) it is predicted that the outer circuit originally comprised 21 uprights. Posts in the inner circuit also appear to have been evenly spaced, set between 3.00–3.45m apart. The complete inner ring would therefore have included around nine uprights, creating a narrow c. 1.00m wide ‘aisle’ between the perimeter wall and the structure’s open interior.





Sample 1



Sample 2

Figure 5.25. Pit F.61. Top: section and photograph of F.61 and adjacent features, showing the location of soil block removed for micromorphology. Bottom: Detail of soil block with micromorphology sample locations and thin sections (1 and 2). Note missing layer B in sample 2 (lost during sampling), missing layer F in sample 1 (lost during sampling, represented by F in sample 2) and the overlapping of layer E between samples 1 and 2.

on its eastern side by a smaller, irregular profiled feature, 0.45m in diameter and 0.24m deep, which was only recognized in section (Fig. 5.25). Both had identical fill sequences, reminiscent of pit F.495 in Roundhouse 5. The upper profiles contained finely laminated, horizontally bedded bands of reddened sandy-clays interspersed with lenses of what appeared to be ash. These rested upon unburnt basal deposits of charcoal-rich sandy-silts. Micromorphological analysis of the laminated upper fills suggests the reddening was a product of iron impregnation resulting from heat-induced evapotranspiration, probably caused by *adjacent* hearths (see Arroyo-Kalin below). The occasional fragments of calcined bone, burnt flint and carbonized plant remains were also caught within these reddened deposits: a seed from the recut yielding a radiocarbon determination of 770–410 cal BC (Beta-262624: 2460±40 BC).

Lying at the base of the banded fills in F.61, just above the primary deposits (at the point where F.61 was recut), were the crushed but refitting fragments of a substantially intact Fengate-Cromer style Early Iron Age bowl. The condition of the vessel and the manner of its interment, recall both the placed deposits in Roundhouse 5 and those from the waterholes at Bradley Fen. However, the character of this bowl was qualitatively different to those interred elsewhere. In short, this was an intricately decorated fineware vessel, which would have stood out against the myriad of predominantly plain coarsewares jars in the assemblage. It is therefore tempting to connect the treatment afforded to this particular vessel as being in some way a reflection of its status or role within the contemporary ceramic repertoire.

Significantly, other non-refitting sherds from the pot were also recovered from the primary fills of F.61. These were mixed amongst a dump of butchered lamb bones (59 pieces, 345g), lamb representing a minimum of three individuals (slaughter between late summer/early autumn). In light of the ceramic connections, it seems likely that the breakage of the decorated bowl, the dumping of lamb bones in the primary fill and the subsequent placement of sherds on top of this deposit were all related acts. Indeed, we may envisage these materials as the residues of a single episode of formal consumption, which, given the number of lambs butchered, probably involved several households. Further still, since the remains were interred on the unweathered base of the pit, located at the centre of the roundhouse, they could be argued to constitute a foundation deposit. In light of the few stratigraphic associations that exist between internal features, there are certainly grounds for thinking that this pit was cut and partially backfilled at an early stage within

Table 5.2. *Principal lamb/sheep bone deposits in Roundhouse 14.*

Feature	Dimensions (diam. × depth (m))	Sheep/lamb bones (no./wt g)	MNI
F.1	0.61 × 0.17	72/456	4
F.27	0.36 × 0.29	166/764	6
F.40	0.20 × 0.08	16/60	1
F.43	0.20 × 0.08	43/283	3
F.44	0.38 × 0.09	17/63	2
F.61	0.98 × 0.32	59/345	2

the life-history of the structure, perhaps immediately after the building was erected.

Ultimately this deposit may have served to both mark and make a combination of material statements about the ‘birth’ of the house and/or the symbolic significance of the centre of the structure. Judging by the subsequent clustering of postholes/truncated pits around F.61, this zone was clearly an important focus in the building. Its significance was further emphasized by other deposits of disarticulated sheep bone, which packed the shallow cuts of F.27, F.40, F.43 and F.44 (Table 5.2).

A sixth dump of bone was recovered from pit F.1, this time located in the porch interior. Situated on the left-hand side of the threshold (as viewed from the outside) and encroaching upon the porch post, this consisted of a wide shallow cut crammed with 72 lamb bones (456g). The relationship between the pit and porch post suggests the roundhouse was in a state of decay or ruin when the deposit was made and perhaps marked the abandonment of the structure, just as that in F.61 potentially commemorated its foundation. Whatever the incentive for these acts, it is clear that burying dumps of juvenile sheep bones within the roundhouse interior was an important practice, repeated at various points throughout the life of the structure (Fig. 5.24).

Micromorphology of deposits in pit F.61 (Manuel Arroyo-Kalin)

Under laboratory conditions, two sediment thin-section samples (1 and 2) were taken from a block removed from the profile of F.61 (Fig. 5.25). Combined, the samples covered a c. 25cm section of the stratified deposits. Layers were named from top to bottom and the same designations used for both thin-section samples. These were prepared from resin impregnated sediment blocks mounted on glass plates, cut and polished down to 30µm. The sections were subsequently described following the criteria outlined in Bullock et al. (1985), Kemp (1985) and Fitzpatrick (1993).

The macroscopically visible sediments were initially described as five distinct types:

Type I. Red, massive, homogeneous, uncompacted silty-clays, 10 R/4/6.

Type II. White, massive, homogeneous, uncompacted silty-clays, 5 YR/8/1.

Type III. Dark brown, heterogeneous, compacted silty-loam, 10 YR/4/3.

Type IV. Red-pink, homogenous, uncompacted silty-clay, 10 R/6/6.

Type V. Light brown heterogeneous, compacted silty-loam, 10 YR/6/4 - 10 YR/7/6.

No remains of artefacts or blackened mineral clasts indicative of fire action were recorded in any of the layers. A general top to bottom gradation from red to brown was observed in the stratigraphy, comprising sediment types I, III, IV and V. In particular, sediment type IV gradually graded in colour from a deep red to a whitish pink without appreciable changes in granulometry, other than the inclusion of subrectangular to subrounded mineral clasts (layer E, Fig. 5.25). Sediment type III seems to be locally intrusive, or maybe more generally indicative of a hiatus in deposition.

Compared to the macroscopic observations, the micromorphological analysis of the two thin sections evidenced additional layers of sediment type II. Combined, the samples present evidence for two layers, one (layer H) not apparent during excavation and another (layer B) lost during sampling (owing to its very uncompacted structure). Conversely, the clear-cut macroscopic differentiation of sediment types I and III in layer C (Fig. 5.25) was not evident in thin section. It is likely that this indicates a sampling discrepancy, further highlighting the local character of sediment type III. Table 5.3 shows the correspondence between macroscopically observed sediment types and microscopic layers.

Layers A, C, E, G and I may be characterized as generally poorly sorted, apedal to moderately developed angular blocky to spongy microstructure, iron impregnated silty to sandy clays. Some variation is observed in the size of the stone fraction (layers E, G, H), while layer A shows a wide vertical channel, probably a worm passage related to that shown in Fig. 5.25. Layers B, D, F, H and cryptocrystalline pedofeatures in layer J are generally apedal, homogeneous, well-sorted and massively structured microsparitic lenses. Basal layer J is an apedal, heterogeneous, poorly to moderately sorted, silty to sandy clay with a complex spongy microstructure. It appears to be similar in colour and composition to the rest of the feature fills from Roundhouse 14.

With regards to the question of whether F.61 served as a hearth or ash-pit, the observations from the macroscopic and micromorphological analyses suggest that the sediments were not exclusively the result of raking-up hearth-related debris. The sparse organic component present and the general lack of charcoal, burnt sediment and cracking on the very abundant sand- to silt-sized quartz particles together suggest that layers A, C, E and G have not been exposed to direct fire and are not directly derived from combustion features. The widespread variation in sesquioxide impregnation throughout A, C, E, G and I, coupled with the presence of well-defined iron nodules and the

formation of goethite, do however suggest various hypothetically time-transgressive phases of mobilization/formation of secondary iron, possibly associated with nearby heat and the resulting 'forced' evapotranspiration of the iron-rich groundwater. Given that the degree of iron impregnation of the sediments contrasts markedly with those in the excavated deposit (e.g. layer J), but still seem to follow a relative gradation from top to bottom, it is suggested that these layers may have become impregnated during various heating events occurring in a hearth features above (and presumably truncated). This, in turn, suggests that the pinkish gradation expressed as sediment type IV is partially the result of a gradation of iron impregnation, possibly a function of a higher to lower temperature gradient.

An important observation is that all layers have been extensively reworked, as indicated by the poorly intermixed clay component, specifically the lack of generalized striation or microlamination and a poor development of textural pedofeatures such as clay coatings and infillings. This reworking explains a mostly apedal microstructure and suggests that the microsparitic lenses (layers B (absent in thin-section), D, F and H, pedofeatures in J) formed through the rising of calcite-rich water and oxidation at either a surface or textural boundary throughout the profile. The position in the profile of these lenses may be punctuated by variations in pore space affecting the advance of the retreating wetting front (cf. Miller & Gardner 1962, figs 5a–b). This suggests that a similar agent – groundwater – is partially responsible for both the reddening of layers and the deposition and formation of microsparitic lenses; yet, at the same time, it may have affected the profile with different intensities as a function of the presence of overlying heat and variations in pore space. Hints of microsparitic lenses analogous to B, D, F and H, present in layer J, may also be explained as a function of differential pore spacing affecting the wetting front, later truncated by worm-related bioturbation.

By relating a variety of microscopic and macroscopic signatures from a fills sequence of F.61, it has proved possible to assess whether sediments contained therein were part of a hearth feature. From the general structure of the sediments observed in thin-sections, the lack of surface cracking on quartz particles, the general scarcity of charcoal and other burnt organic material, it may be argued that both their reddening and the intercalated calcitic lenses is explained by iron/calcium carbonate rich groundwater fluctuations, partially associated with local evapotranspiration produced by increased temperature. A gradient of temperature may possibly be invoked to explain different, hypothetically time-transgressive events of iron impregnation, possibly caused by combustion events in a nearby but not directly associated hearth.

Table 5.3. Pit F.61 sediment types and corresponding layers.

Sediment type	Layer in thin section
I	A, C, E
II	B, D, F, H
III	Not observed in thin section
IV	G, I
V	J

Buildings identified by four-post entranceways – Roundhouses 7, 8 and 9

Lacking wall-trenches or clearly demarcated post-rings, the defining feature of the last three roundhouses at King's Dyke was the presence of heavy-set four-post doorway structures (Fig. 5.26). The buildings were located in a row at the centre of the site, situated between the 2.7 and 3.0m contours. Roundhouses 7 and 8 were fully exposed, whereas the northeast half of Roundhouse 9 lay beyond the excavation transect.

Roundhouse 7

The westernmost structure in the group was Roundhouse 7, which displayed a southeast-facing entrance (1.30m wide) marked by postholes F.236–39. In common with the other buildings, the structure's inner entrance posts were slightly larger and more deeply footed than the exterior pair, measuring up to 0.60m in diameter and 0.44m in depth. These were filled with greyish-brown sandy-silts, as were all the features associated with the roundhouse. Whilst gauging the original size of the building is obviously problematic, based on the assumption that postholes F.230, F.243, F.245 marked the perimeter of the structure, the roundhouse is estimated to have had a diameter of c. 8.5m.

A total of seven postholes and a single pit (F.228) were enveloped by the hypothetical wall-line (posthole diameter range, 0.25–0.60; depth range, 0.05–0.22m). At the centre were paired postholes F.235 and F.266, which probably provided the main structural supports for the roof. This fixture was aligned upon the entrance, creating symmetry through the footprint. The same arrangement was also evident in Roundhouse 8 and represents a key architectural feature uniting these buildings. Eight features associated with the structure yielded finds (F.228, F.230, F.234–35 and F.236–39). Combined, these comprised just four sherds of pottery (7g), five scraps of bone (11g), one worked flint, four bunt flints (15g) and one burnt stone (29g).

Roundhouse 8

With the exception of its east-facing doorway (width, 1.60m), the architectural imprint of Roundhouse 8 was remarkably similar to that of Roundhouse 7. The entrance was again defined by a distinctive four-post setting, marked by F.201–04 (diameter range; 0.30–0.70m; depth range, 0.07–0.35m). The largest of these postholes, F.204, retained traces of a tapered post pipe, 0.16m in diameter and 0.35m deep, suggesting the upright had been left to rot *in situ*. Like Roundhouse 7, the perimeter is estimated to have had a diameter of 8.5m, with the wall-line potentially marked by the

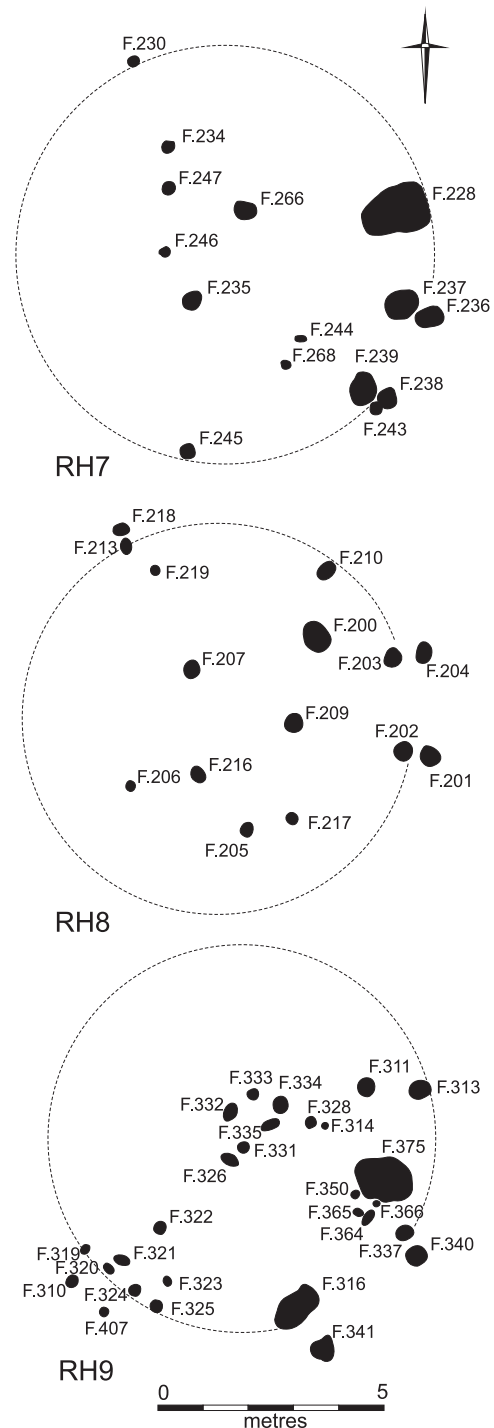


Figure 5.26. Plan of roundhouses defined by four-post entranceways.

position of posthole F.210 and paired posts F.213 and F.218, the latter perhaps being a repair.

The internal features included seven postholes (diameter range, 0.22–0.35m; depth range, 0.10–0.18m) and a single pit (F.200). At the centre of the building

were paired postholes F.207 and F.216. Set opposite the entrance, and mirroring the arrangement in Roundhouse 7, these were probably the main internal supports for the structure. The pit was a shallow cut feature (0.68m in length, 0.53m in width and 0.20m in depth), located in a similar position to the 'cooking pits' observed in Roundhouses 5 and 10. This feature contained three bands of grey charcoal-rich silts capped by a layer of orangey-grey clay. Caught within the matrix of these fills were three fragments of pottery (28g), nine scraps of animal bone (22g), a single piece of fired clay (18g) and three burnt stones (14g): the building's largest artefact assemblage. Other finds were recovered from six of the structure's postholes (F.202, F.204, F.210, F.216–18), but amounted to just nine sherds of pottery (29g), five pieces of animal bone (19g), a single worked flint and two burnt stones (2210g).

Roundhouse 9

Roundhouse 9 was only partially revealed in the excavation area. It displayed a southeast-facing entrance, defined by F.316, F.337, F.341 and F.349 (width, 2.1m) and is estimated to have had a similar diameter to the other two buildings in the group (8.30m). The largest posthole in the doorway setting was F.316. This was an oval feature (1.10m in length, 0.60m in width and 0.38m in depth) with an irregularly profiled base and mixed fill sequence which suggested that the post had either been replaced during occupation, or was dug-out and backfilled on abandonment. The fill of deepest area of the cut contained two large refitting shoulder sherds of a decorated Fengate-Cromer-style bowl (45g), together with 12 fragments of animal bone (14g) and a single scrap of burnt clay (1g). In light of the treatment shown to a similar vessel in Roundhouse 14 – the only other Fengate-Cromer bowl recovered from King's Dyke – it is tempting to see this as another formal deposit, this time associated with the abandonment/decommissioning of the building.

The original wall-line of Roundhouse 9 was probably marked by the short arc of closely set posts on the west side of the building, all measuring <0.25m in

diameter and 0.16m in depth (F.319–20 and F.324–25). These were flanked by two further postholes on their exterior (F.310 and F.407), which may have been repair posts. Lying within the interior of the building were a further 17 postholes (diameter range, 0.19–0.60m; depth range, 0.06–0.23m) and a single pit (F.375). At the centre was posthole F.326 (0.35m in diameter and 0.10m deep), which contained another dump of lamb bones (74 fragments, 448g) similar to those from Roundhouse 14.

Despite their frequency, no regular fixtures could be discerned from the posthole scatter in the interior, though not all need have been contemporary with the building. Notable is F.334, which owing to its central position, may have once formed part of a two-post setting opposite the entrance, similar to those in Roundhouses 7 and 8. There are parallels too in the siting of the structure's only pit, F.375, which occupied a comparable location in the interior, close to the northern pair of doorway posts. This measured 1.20m in diameter and 0.40m in depth and, like all the postholes in Roundhouse 9, was filled with a homogenous deposit of pale grey sandy-silts. In total, 10 of the features associated with the Roundhouse 9 yielded finds (F.311, F.316, F.326, F.328, F.331, F.340–41, F.364, F.366 and F.375). Other than the material already mentioned, the assemblage included a further 4 sherds of pottery (7g), fragments of animal bone (583g), 12 worked flints and single piece of burnt flint (32g).

Four-post structures

Four four-post structures were revealed at King's Dyke (Fig. 5.27). Two were set closely together towards the centre of the site between Roundhouses 10 and 11 (four-post structures 4 and 5), with the others located at either end of the settlement swathe: Four-post Structure 3 lying 10m north of Roundhouses 5 and 6, with Four-post Structure 6 set 25m from either Roundhouses 13 or 14. The buildings were sub-rectangular and sub-square in form with postholes averaging 0.26m in diameter and 0.33m in depth (Table 5.4). These were all filled with mid to dark grey sandy-silts, with no traces of

Table 5.4. *Summary of four-post structure dimensions and finds totals.*

Four-post structure	Site	Date	Structure dimensions (m)	Posthole dimensions (diam. × depth (m))	Finds (no./wt)
1	BF	?LBA	2.9 × 3.0	0.33–0.47 × 0.16–0.30	Bone (1/1g); fired clay (1/31g)
2	BF	?LBA	2.75 × 2.80	0.23–0.40 × 0.12–0.24	Bone (3/18g)
3	KD	EIA	2.75 × 2.75	0.44–0.78 × 0.36–0.43	Pot (1/5g)
4	KD	EIA	1.85 × 2.40	0.20–0.25 × 0.15	Pot (3/5g)
5	KD	EIA	2.0 × 2.05	0.25–0.4 × 0.15–0.3	Pot (2/8g)
6	KD	EIA	1.70 × 1.90	0.20 × 0.20	-

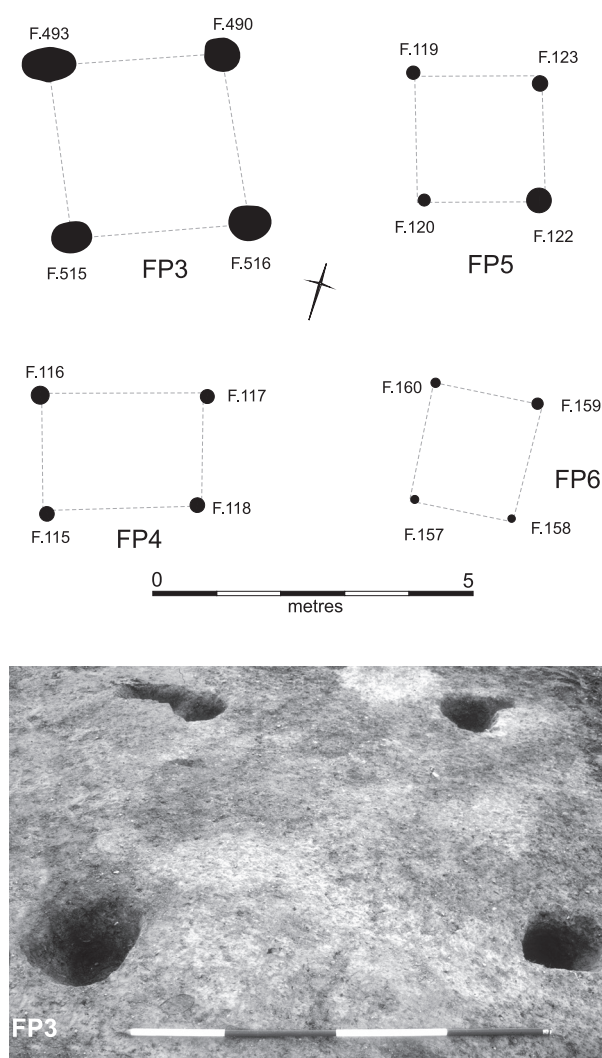


Figure 5.27. Four-post Structures 3–6.

post-pipes. Finds were limited to a single sherd (2g) from Four-post Structure 3, three scraps of pottery (5g) from Four-post Structure 4 and a further two sherds (8g) from Four-post Structure 5. Given the scarcity of pits large enough to be deemed ‘grain silos’ on the site, the buildings are best interpreted as raised granaries.

Other pits and postholes in the settlement swathe

Of the 72 pits assigned to this phase at King’s Dyke, 21 were internal to the roundhouses or have otherwise already been discussed in relation to these structures (i.e. pits F.84, F.307, F.360–61). However, of the 51 remaining pits, it should be stressed that only 24 (47%) yielded sherds of Early Iron Age-type pottery, meaning 27 have no definite basis for period attribution (19 of which yielded no finds whatsoever). There exists then a question mark over the phasing of some pits and also

the vast majority of non-structure related postholes in the settlement swathe: 79 in total (diameter range, 0.14–0.46m; depth range, 0.04–0.57m), with only 11 yielding pottery (14%) and 62 without finds. That being said, in the absence of any later Iron Age activity on the site (coupled with a scarcity of definite Late Bronze Age remains), it is reasonable to assume that most of these features are contemporary with the Early Iron Age roundhouses.

In general, *most* of the pits on the site were relatively small, shallow features (<1m in diameter and 0.50m in depth), with only one or two fills of grey sandy-silts and/or weathered gravels. Based on Reynolds’s suggestion that pits used for grain storage needed to be *at least* 1m deep (see Lambrick & Allen 2004, 117), only one feature – F.421 – could *possibly* have served this purpose at King’s Dyke, even allowing for c. 0.40m of truncation. This measured 2.70m in diameter, 1.33m in depth, and was more in keeping with the size of the waterholes below the 2m contour at Bradley Fen, than other pits at King’s Dyke (Fig. 5.28). Even here, however, there were few clues as to the exact function of this pit, which yielded just two sherds (3g) of Early Iron Age pottery. In fact, most of the features with finds beyond the roundhouses contained only small scraps of pottery and animal bone: material that could have easily entered features incidentally during backfilling. Lacking are any hints that major rubbish heaps/middens were located within the area of the excavation transect. In truth, there are surprisingly few finds from outside the structures overall (Fig. 5.30). The only feature assemblage warranting special mention was from pit F.66, which contained a placed deposit of two crushed but partially complete vessels (120 sherds in total, 678g), two adjoining fragments of a saddle quern (2754g) and 35 pieces of animal bone (232g).

Discussion – the character and development of the Early Iron Age settlement at King’s Dyke

When set against the character of Late Bronze Age remains at Bradley Fen, the swathe of Early Iron Age features on the King’s Dyke terraces present a very different picture of settlement. Whereas the isolated structures and dispersed pits at the former reflect intermittent activities and perhaps seasonal patterns of residency, the aggregated feature-scatters at King’s Dyke and, most impressively, the 10 roundhouses and 4 four-post structures, speak of more persistent, intensive forms of occupation emerging over the course of the earlier first millennium BC. Though similar forms of open and agglomerated Early Iron Age settlement have been earmarked on the higher ground around Fengate, sites such as Tower Works (Brudenell et al. 2009) and Vicarage Farm (Pryor 1974b) have seen limited excavation

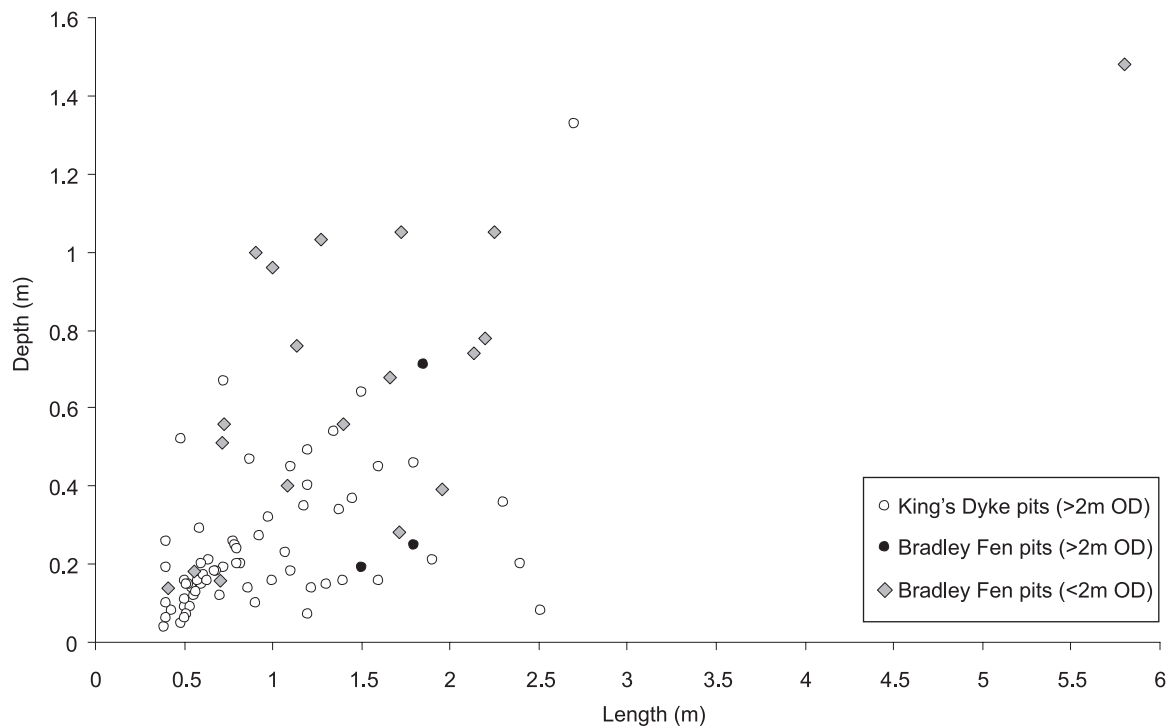


Figure 5.28. Pit dimension plot by site and contour range.

(together with Abbott's piecemeal investigations in the Pre-War Gravel Pits) and, in truth, provide a narrow perspective on the character of these sprawling sites. Whilst the same could be claimed of the King's Dyke investigations, given that the feature-scatter clearly extends beyond the excavation transect, this is still without doubt the most comprehensive picture of an Early Iron Age settlement focus within this landscape. The pressing issue is whether this imprint results from the growth of an agglomerated village-like settlement or whether it represents the gradual shifting of just one or two households over time.

The ways these remains are interpreted have important implications for our broader understanding of the scale of co-resident communities in the Early Iron Age and, likewise, the nature of people's investment/commitment to particular locales. The theme of settlement nucleation has conventionally loomed large in reviews of the later prehistoric sequence in the Flag Fen Basin (e.g. Pryor 1984, 210–12; 2001, 412–13). In a range of accounts, the turn of the first millennium BC has been fastened upon as the point at which extensive forms of occupation, characterized by small, short-lived farmsteads, are seen to give way to the emergence of more persistent aggregated settlements. Although this model is perhaps based more on evidence for the settlement signature in periods bracketing the Late Bronze

Age and Early Iron Age in the Flag Fen Basin, it still has its merits and, as a reflection of general long-term landscape processes, continues to hold its ground. In fact, the immediate contrasts between the remains at Bradley Fen and King's Dyke could be cited to further underline this distinction. However, there are subtleties in the nature of the evidence which suggest that such shifts in the character of settlement were not quite as simple or immediate.

Building sequences

Attractive though it is to see King's Dyke as a pristine agglomerated settlement, heralding the inception of nucleated occupation, it is more likely that only a few of the site's roundhouses were contemporary with one another. This is hard to prove, given the lack of stratigraphic associations, the relative imprecision of ceramic chronologies and just two radiocarbon dates. Nevertheless, falling back on more basic observations concerning the distinctive but shared architectural features of some roundhouses, it is possible to identify structures which are likely to have been contemporary and, therefore, outline a model for the development of the settlement (Fig. 5.29).

This model must be viewed as provisional, but all caveats aside, it seems likely that the structure sequence began with the erection Roundhouse 12 at

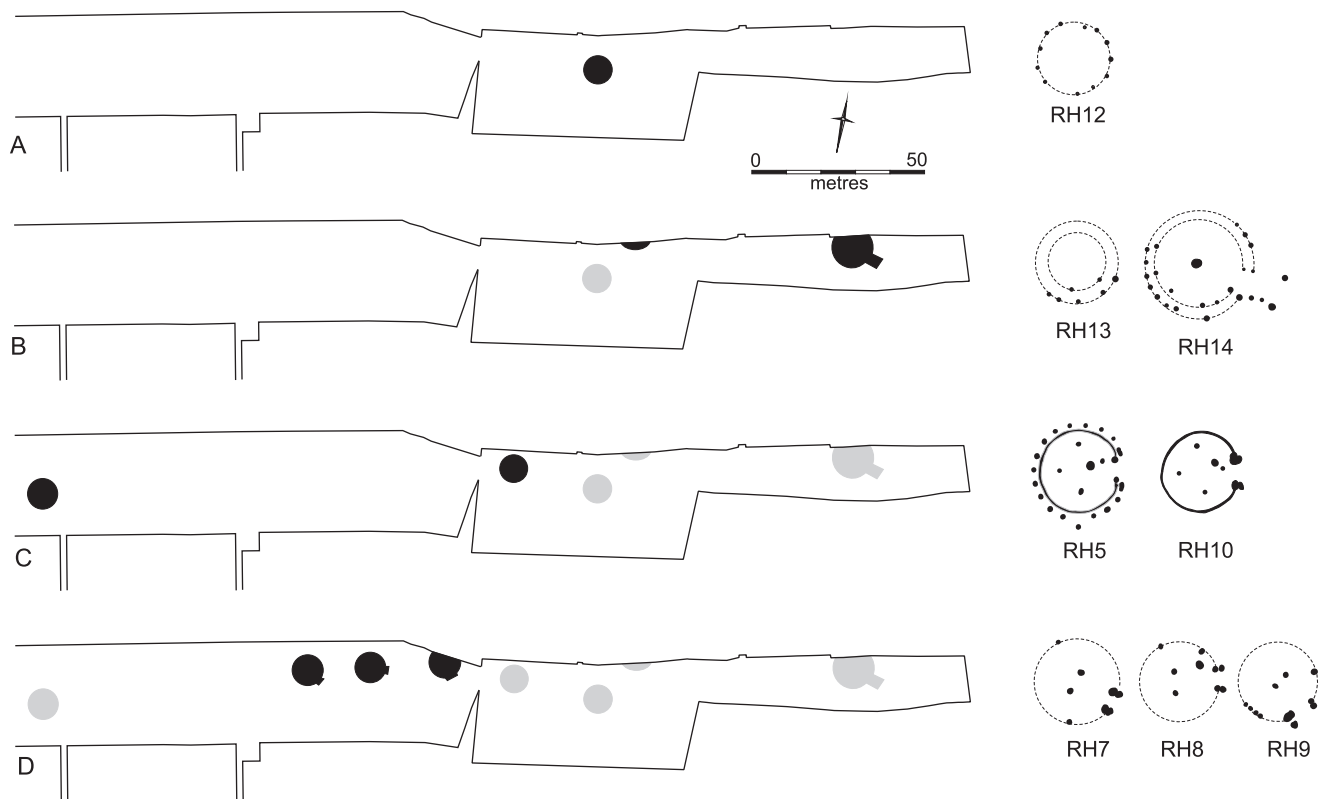


Figure 5.29. Model of the building sequence at King's Dyke. The model assumes that similarities in the footprint/ construction technique of the roundhouses constitute the meaningful hallmarks of subtly different architectural traditions: ones which can be read and sequentially ordered like other material type-fossils. For some, this may be contentious, but the alternative of arguing that the roundhouses were all contemporary would involve the far more problematic task of explaining why their floor plans varied to the extent evident. Admittedly, the function of a building, the size of its resident group and/or the status of its occupants could have conditioned the architecture in one way or another. Yet since there is no corroborating evidence that any of these factors were a cause of roundhouse variability at King's Dyke (the exception being the small size of the 'ancillary structure', Roundhouse 11), reason dictates that the differences are more likely to relate to a sequence of changing architectural traditions/trends and, therefore, a sequence in settlement development.

King's Dyke. The assertion is founded on the parallels with Roundhouse 4 at Bradley Fen and the character of ceramics from pit F.84 (which may or may not have been internal to the structure, depending on which reconstruction is favoured (see Fig. 5.23). Although Roundhouse 12 was significantly larger, the form of these post-ring structures was remarkably similar, especially if one accepts the satellite posts around Roundhouse 12. Given these connections and the radiocarbon date achieved for Roundhouse 4 (900–800 cal BC), it seems fair to assume that the King's Dyke structure had its origins toward the end of the Late Bronze Age, if not the Bronze Age–Iron Age transition. This would also accord well with the typo-chronological dating of the pottery from F.84, unlikely to post-date c. 850–750 BC.

The second major phase of building was marked by the construction of Roundhouses 13 and 14. Both structures were defined by double post-rings, with the Early Iron Age origin of Roundhouse 14 confirmed by the radiocarbon date of 770–410 cal BC. Moreover, given the size of this building and its morphological affinities to the 'great' double-ring roundhouses of southern Britain (e.g. Cow Down, Wiltshire (Hawkes 2007); Pimperne Down, Dorset (Harding et al. 1993); Old Down Farm, Hampshire (Davies 1981)), a date range within the *Earliest* Iron Age c. 800–600/550 BC would be implied, fitting comfortably with the radiocarbon evidence. Following on from this, the third phase is arguably heralded by the construction of Roundhouses 5 and 10, which shared wall-trenches, a diamond-shaped fixture of internal postholes and

'cooking' pits set opposite the northern entrance posts. The external post-ring of Roundhouse 5 aside, the basic architectural footprint of these buildings was remarkably consistent (Fig. 5.30). As with Roundhouse 14, an Early Iron Age radiocarbon date was achieved for Roundhouse 5, but the calibrated range was slightly later at 520–380 BC. Whilst acknowledging the danger of relying on single determinations, the differences in the radiocarbon age and calibration of these two dates does lend weight to the proposed sequence.

Leaving aside Roundhouses 6 and 11, which are hard to place within the scheme (owing to their size and truncated condition), the fourth and final phase is argued to be marked by the construction of Roundhouses 7–9. All three of these buildings shared robust four-post entrance settings, with the symmetry of Roundhouses 7 and 8 further underlined by their central pair of postholes (Fig. 5.30). In terms of material connections, the recovery of Fengate-Cromer style sherds from Roundhouse 9 could be cited as evidence that the structures belonged to an earlier phase in the proposed sequence, since the only other wares of this type derived from Roundhouse 14. However, as first noted by Pryor (1984, 153) this style of pottery had a long currency, remaining in vogue throughout the Early Iron Age (c. 800–400/350 BC) around Peterborough and much of the western fen-edge in Cambridgeshire (see Brudenell below). This being the case, the order of the sequence presented here continues to rely more upon the morphological relationship between different groups of structures. In this instance, by far and away the closest parallels are with the Middle Iron Age roundhouses at Bradley Fen, detailed in the following chapter. On the grounds of these affinities then, it seems logical to assert that Roundhouses 7–9 were constructed late within the Early Iron Age sequence/structure succession at King's Dyke.

Implications

Whilst it would be possible to formulate alternative models of site development at King's Dyke, the various strands of evidence point to this not being a single phase settlement of village-like proportions, but a succession of structures and other features imprinted over time. Given the suggestion of a terminal Bronze Age/transitional date for Roundhouse 12 and a likely origin at the close of the Early Iron Age for Roundhouses 7–9, what we have may be the result of more than four to five centuries of activity and rebuilding. Whether or not this activity was continuous or intermittent is harder to gauge. On the one hand, the total quantity of finds from the site seems too low to support claims for an unbroken sequence of occupation (see below). On the other, given that several structures showed

traces of repair, it would only require each building to be completely replaced every 65 years (perhaps two generations) for a succession of single roundhouses to span the upper estimate for the settlement timeframe (this calculation excluding Roundhouses 6 and 11).

In reality, patterns of residency probably fell somewhere between these extremes, especially given the narrow confines of the excavation window. Still, the broader inference to be drawn is that the architectures of settlement and their rhythms of renewal were becoming increasingly focused on certain places in the Early Iron Age. Though patterns of occupation remained instilled with a measure of fluidity, resulting in the gradual process of settlement drift, the spatial distance between the abandonment of one set of fixtures and the construction of another was shortening, even if things rarely overlapped (hence the lack of stratigraphic associations). At the same time, the temporal duration of architectures such as roundhouses seems to have increased through the investments in repairs and the replacement of internal fixtures. In plan, these interior spaces are sometimes cluttered with features. And where these cluster or recut, we encounter evidence for the formal deposition of materials: acts commonly incorporating groups of lamb bones. Importantly, these practices were shared across a number of roundhouses of different type, suggesting they were rooted in a long-lived depositional tradition intimately linked to the occupation of the structures.

Whilst the form of these deposits was clearly different in character to those associated with the waterholes at Bradley Fen, they carry a common theme in that they constitute explicit event-marking or place-marking practices. In short, these acts drew attention to points of importance, whether these were specific moments in the history of roundhouses (e.g. foundation and abandonment) or the recutting of waterholes crucial for livestock. They can likewise be viewed as a reflection of the increasing commitment to particular locales and architectures, as well as a concern with physically marking this sense of attachment or belonging. This process was also carried forward in the way that features and structures were renewed close by, but rarely on top of, previously abandoned architectures (heightening the visibility of settlement in the archaeological record). With such reiterative forms of occupation coming to the fore in the early first millennium BC, the expression of settlement continuity may have begun to be important for framing new ideas of descent, inheritance and other tenurial relationships.

On this theme, it is surely no coincidence that ditch-defined fieldsystems in the Flag Fen Basin (and elsewhere in Cambridgeshire) ceased to be maintained

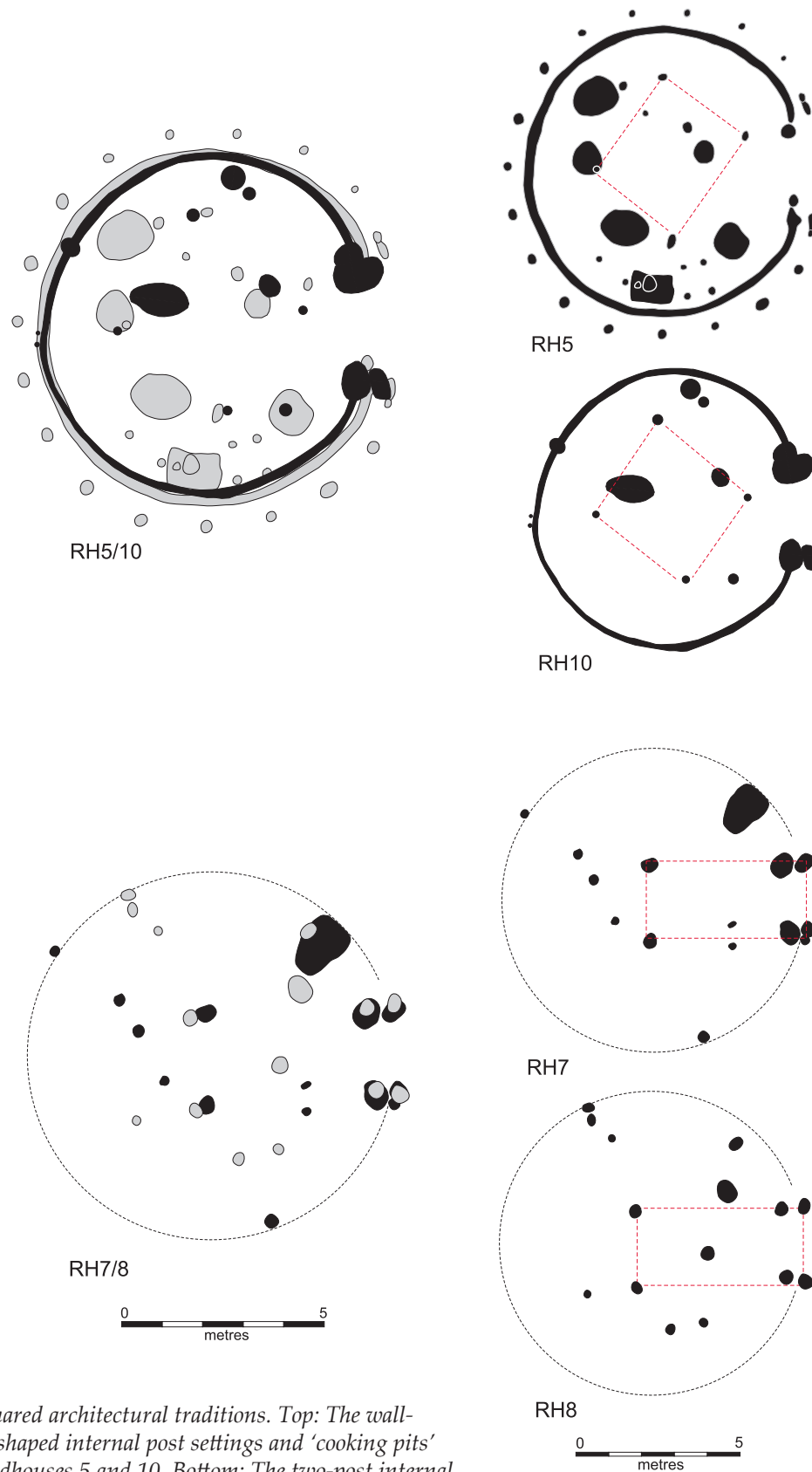


Figure 5.30. *Shared architectural traditions. Top: The wall-lines, diamond-shaped internal post settings and ‘cooking pits’ located in Roundhouses 5 and 10. Bottom: The two-post internal supports opposite the doorways in Roundhouses 7 and 8.*

at the same time that more palpable and persistent forms of settlement come into focus. Whilst the grain of earlier land divisions may have held a lingering significance in this landscape, as previously discussed, people's relationships to these land parcels and one another was no longer (re)defined through the cutting of field boundaries. Instead, rites of access or ownership even, may have been underpinned by dwelling amongst the plots that groups laid claim over. Continuity in settlement would therefore have provided the historical link to the land which legitimized those claims. It is perhaps for this reason that structures and other features were rarely rebuilt on top of one another. If the longevity or ancestry of settlement became important to concepts of tenure, then visible demonstration of that history of occupation was potentially important too. By gradual shifting architectures, groups created a trail of redundant pits, ruinous structures and scatters of refuse ingrained in former floors, yard surfaces and midden piles: a tangible legacy of long-term occupation. Quite simply, groups were residing amongst the fragments of broken, abandoned and accumulated things.

In these conditions, substances such as refuse may have taken on new meanings. As several authors have highlighted (e.g. Parker Pearson 1996, 125–27; Needham & Spence 1997, 85; Brück 2001, 154), fixtures such as middens could have developed connotations of fertility, regeneration or even affluence in some contexts, whilst in others they potentially served as a visible symbol of a community's link with a place. Similarly, as surface refuse-scatters incorporated the mixed residues of previous actions and activities, they may have been perceived as providing a connection to a group's immediate past. Whilst it seems a little farfetched to argue that these qualities were always acknowledged in each and every act of deposition, there were no doubt moments where these were understood as being effective substances in commemorative rites or other attempts to make outwardly explicit material statements. Admittedly these can be hard to distinguish from more mundane practices of refuse disposal at King's Dyke. Still, regardless of the circumstances in which these things actually entered the ground, the mixed and fragmented condition of most assemblages bears testimony to the duration of settlement and the degree to which artefacts and architectures were reworked in this context. In short, they are telling of the material conditions of settlement and, more broadly, the ways that the residents attended to the fabric of these spaces over time.

Pulling these various strands together, it seems fair to suggest that settlement drift at King's Dyke was not just a reflection pattern of household relocation,

or an inevitable consequence of more persistent forms of occupation. Rather it was a historically contingent process linked in part to the gradual restructuring of tenurial rights, which saw groups refining their relationship to land and one another. This did not occur overnight, but unfolded during the course of the earlier first millennium BC. That being said, the seeds of these changes may have been sown long before, in the Middle Bronze Age, when patterns of land allotment were first demarcated through large-scale programmes of ditching. With the landscape gridded and pathways to some extent fixed, the fieldsystem served to constrain movement and potentially tether patterns of settlement. The long-term consequences of these changes could not have been anticipated, nor could the transformations in other social and material traditions which followed in the first millennium BC. Nevertheless, the effect can be traced in the archaeological record, particularly when we examine some of these changes thematically.

Foodways

Following Schulting (2008, 90), the term 'foodways' is used to denote the range of culturally embedded practices surrounding the production, preparation, consumption and disposal of foodstuffs. The concept provides the starting point for exploring how plants, animals and different types of artefacts (e.g. pottery and querns) were employed by communities in the quest for sustenance and the fulfilment of other social needs. This goes beyond a mere interest in calorific intake or nutritional provision and includes the examination of a range of productive technologies, the utensils employed and the social contexts in which foodstuffs and beverages were consumed. It can also encompass a consideration of cuisine, dining etiquettes, communal politics and the treatment given to the residues of mealtime and food preparation activities. As such, the concept offers the possibility of finding common ground between a range of specialist contributions traditionally bracketed into artefact and economic studies. These can often feel detached and sometimes fail to chime with the wider themes of books or monographs. The aim here is to try and integrate these more successfully, by touching on various facets of the foodways theme from different material standpoints.

Foodways in context – the character and potential of the material record

With the ditches of the Middle Bronze Age fieldsystems no longer maintained nor apparently augmented after c. 1200 BC in the Flag Fen Basin, our ability to trace the organization of the agricultural landscape in the

earlier first millennium BC is considerably restricted. Not only do we begin to lose sight of the more tangible patterns of land allotment, but we also lose touch with high-profile debates concerning issues of economic intensification, agricultural productivity, questions of arable versus pastoral regimes and stock management strategies, to name but a few. These themes are all well rehearsed in relation to fieldsystems and are often considered as factors crucial to their instigation. By contrast, discussion is much more muted when it comes to the post-fieldsystem landscape in the Flag Fen Basin, or the question of what the demise of field boundary construction meant for 'intensification' and other social relations of agricultural production. Instead, more environmentally determined arguments have tended to come to the fore in discussion, with focus shifting to the economic importance of the fen-edge in later prehistory. This switch may be warranted, but it glosses over a major interpretative conundrum: if fieldsystems are a reflection of agricultural intensification, why is the 'economic' evidence so much richer in the post-fieldsystem landscape?

In general, it is certainly true that the material basis for making claims about the agrarian economy is much more robust in the archaeological record of the Late Bronze Age and Early Iron Age than it is for the Middle Bronze Age in this region. The residues of food processing and consumption practices and the utensils employed in these activities, come into sharper relief at the same time as the emergence of more tangible and persistent forms of occupation. Furthermore, not only is the material from this period more plentiful, but as Rajkovača notes, it derives from a greater range of contexts. There are more animal bones, more charred seeds and more fixtures for agricultural produce (pits and four-post granary structures) on which to hang debates about animal husbandry, cultivation and other activities in the agricultural calendar. Whether or not these trends can be read as evidence for further intensification is something of a moot point. We have hints from the kinds of crops being grown on the terraces in the Early Iron Age that soils may have begun to be depleted in nutrients (see de Vareilles below), perhaps suggesting more intensive cultivation. Conversely, there is no marked increase in cereal pollen percentages (figures of 3–5% being typical for all later prehistoric samples from the Basin, see French and Scaife this volume for an overview), with Boreham's analysis (above) suggesting a consistency in landscape stewardship. By all accounts, pasture still dominated the lower terraces, much as it did in the Middle Bronze Age. The only difference being a slight shift, or displacement upwards, of these grasslands.

The contextual variability noted above is important, particularly when examining the differences in material representation at Bradley Fen and King's Dyke (Figs 5.31 & 5.32). In the faunal record for instance, sheep dominated at King's Dyke, whereas cattle were the more prolific species at Bradley Fen. Similarly, charred cereals, crop-processing waste and quernstones were exclusive to contexts at King's Dyke. A different picture of 'economy' can therefore be formed by looking at these two sub-assemblages/sites independently, though each potentially reflects the way different parts of the terrace were utilized: the lower damp-ground slopes for cattle grazing, the higher terraces for cereal cultivation and sheep herding.

With this variability in mind, the paucity of fen/river-derived fauna at Bradley Fen and King's Dyke – there being just one small group of fish bones recovered – should not be overemphasized. Fish weirs, traps and other remains from the Must Farm palaeochannel and platform site demonstrate that fish were important in the diet during this period (Gibson et al. 2010; Robinson et al. 2015). Again, the landscape patterning in species' representation is intriguing, for it implies that trends in the faunal record are inextricably linked to the environs examined in this period. In other words, just as cattle bones dominate assemblages from the low-lying pastures and sheep on the dryland terraces, fish remains are largely the preserve of deep water locations. One obvious explanation for this patterning would be that animals and fish were butchered and deposited near the places where they were caught/conventionally herded. For this reason, cattle bone may be underrepresented at King's Dyke because carcasses were predominantly processed elsewhere and cuts of beef were brought to the settlement for consumption. The same may be said of fish. Though for this to hold true, deep water sites would have to be envisaged as both catching and filleting stations.

Given that the size of faunal assembles in question, not to mention the range of taphonomic and other sampling biases which may have skewed these trends, it is perhaps prudent to reserve judgment on some of these wider issues, at least until the time when the Must Farm material has been fully analysed. That being said, if we are to gain a broader perspective on the relative importance of different species in this period, it is clear that assemblages are required from sites in different zones of the landscape. Attention to context is therefore crucial and this is no less important when considering the remains at hand from Bradley Fen and King's Dyke. On the topic of foodways, it is noteworthy that most of the major faunal assemblages, pottery groups and pieces of quernstone derived from formal dumps of material in waterholes or pits within

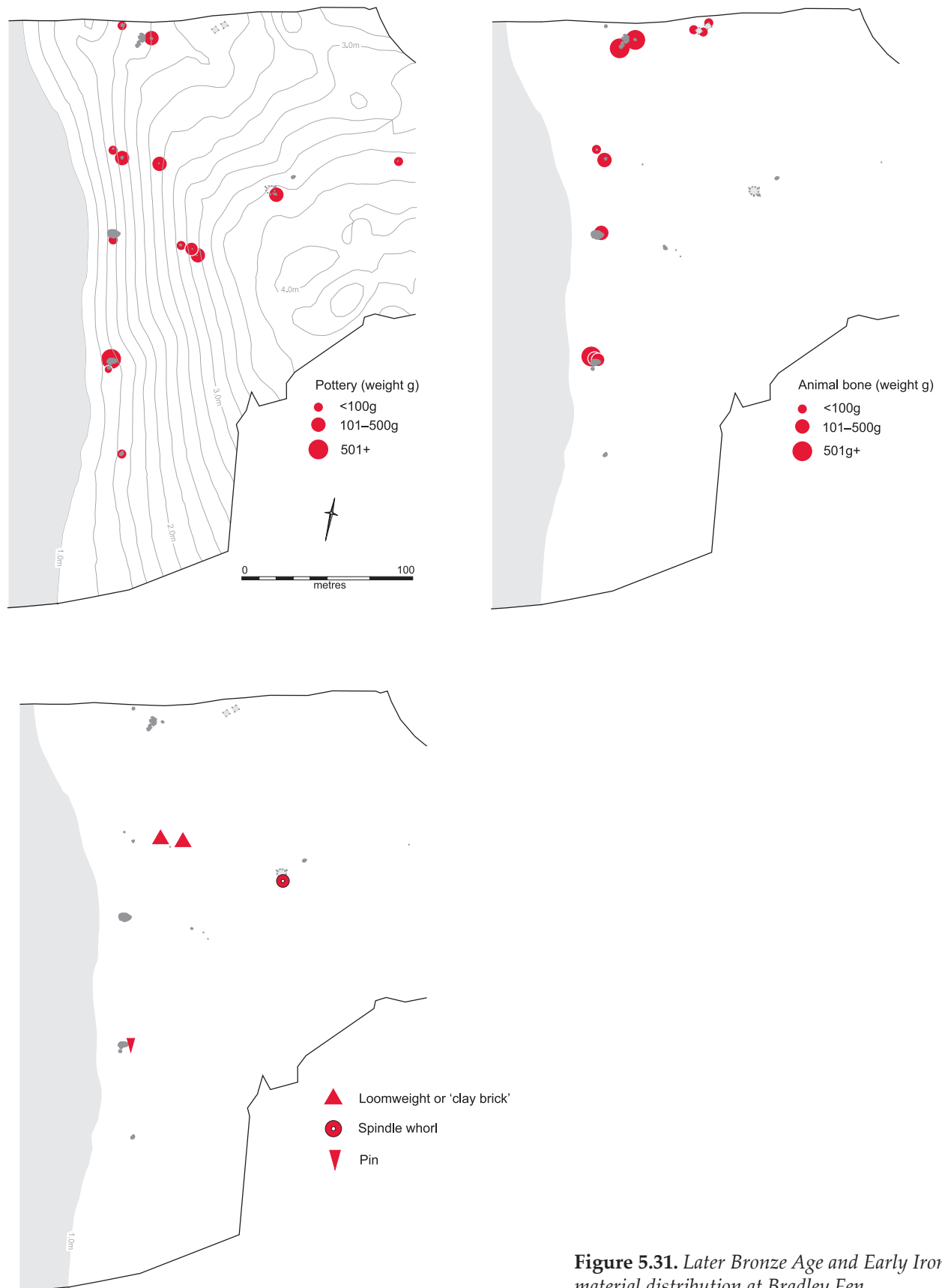


Figure 5.31. Later Bronze Age and Early Iron material distribution at Bradley Fen.

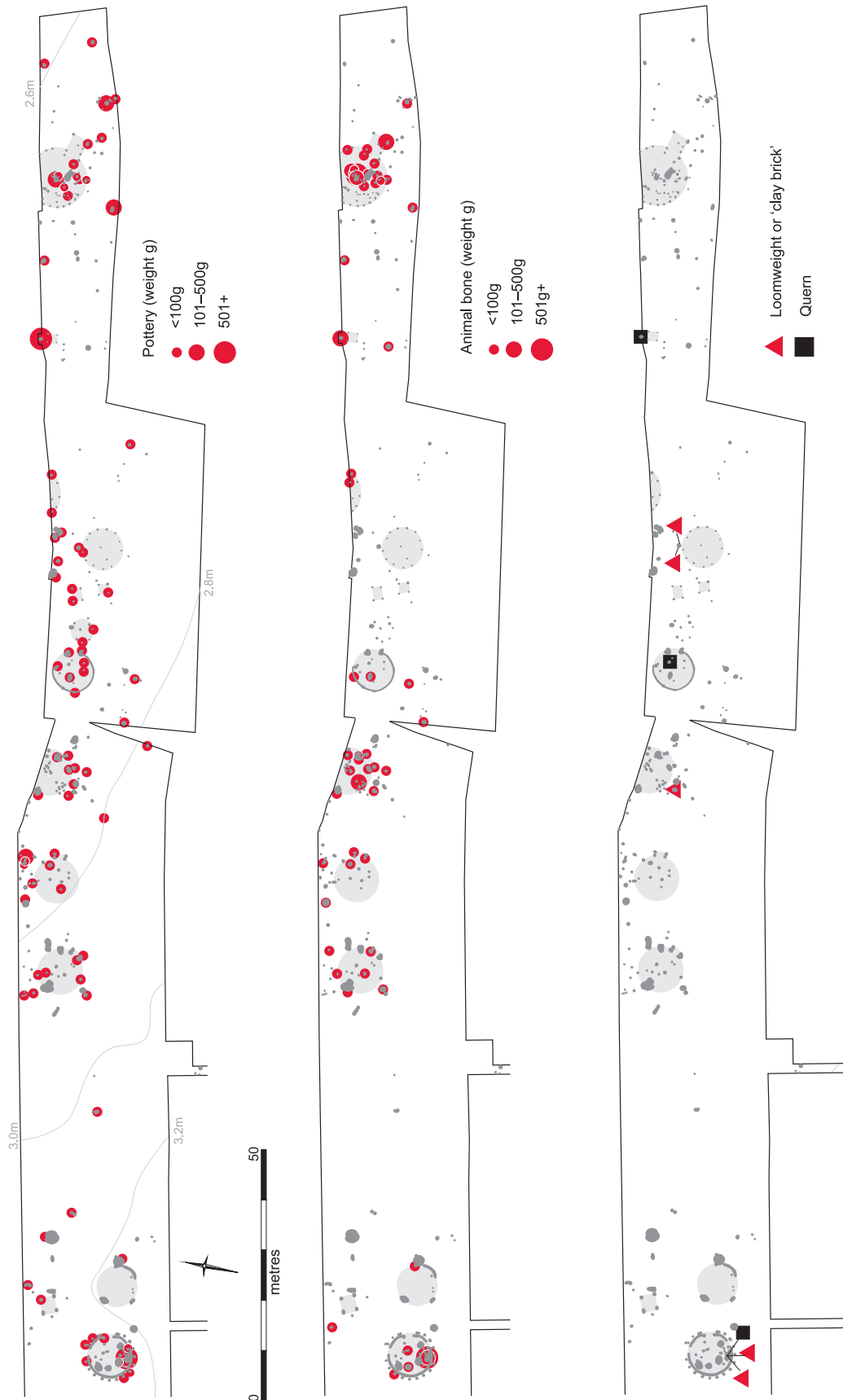


Figure 5.32. Early Iron Age material distribution at King's Dyke.

roundhouses. Indeed, these standout deposits account for the vast majority of all finds. This is a sobering reminder that our picture of 'economy' is based largely on remains generated and deposited in a very particular set of social circumstances. For example, the high percentage of sheep bones at King's Dyke is without doubt a consequence of the formal treatment of lamb remains in the roundhouses: this being a long-lived tradition, perhaps associated with the foundation and/or abandonment of structures. The same can be argued for the faunal signature at Bradley Fen, though here cattle and pigs were the favoured species.

If anything, the *general* character of the economy is harder to grasp from such deposits. Instead, they are telling of the social contexts in which episodes of consumption occurred. Their character suggests they constitute the residues of formal dining events or feasting episodes; some incorporating fineware decorated bowls and other vessels whose use may have been reserved for these occasions. In terms of the faunal signature, counts of the minimum number of individuals in these deposits imply that both the scale of consumption and the scale of participation in these events were pitched at different orders of magnitude. Though all these events potentially involved groups larger than a single household, those associated with the lamb bone deposits at King's Dyke may have been intimate affairs between neighbours or kin, whereas the size of least one of the deposits of cattle bone at Bradley Fen (F.528) suggests wider community involvement and probably large-scale feasting.

Although all these deposits were single set-piece events, there are some smaller details which connect certain episodes, such as the distinctive butchering techniques that saw some sheep and cattle carcasses split down the sagittal plane (see Rajkovača below). Atypical for this period, these novel forms of butchery may tell of a concern with the presentation and display of carcasses, or other etiquettes surrounding the way meat was portioned and shared with these contexts. The conventions of dining could certainly have been different from everyday mealtimes and is likely to have involved a different repertoire of vessels, i.e. finewares and highly decorated ceramics (see Brudenell below). Fleshing out the details is more difficult. Still, the fact that very similar deposits of lamb bones link structures at King's Dyke – which may have been erected several hundred years apart – suggests that the conduct of these practices was heavily conventionalized and widely acknowledged.

In summary, it is fair to conclude that the character of material from Bradley Fen and King's Dyke speaks more directly to set-piece acts of food preparation and consumption than it does to a general picture

of the economy in this period. In short, the assemblages are probably too small to make a substantive statement on this topic, especially since we await a fuller picture from the excavations at Must Farm. But even with these results in tow, considering the pivotal role of context, there may be more to be gained from focusing on the way that animal products, plants and other artefacts were deployed in different social settings, as opposed to striving for an accurate reconstruction of 'economy'. This certainly chimes with the heart of the foodways theme, which all the authors below have attempted to address: a theme which places practice and context centre stage.

The faunal remains (Vida Rajkovača)

By the beginning of the first millennium BC, the network of ditched Bronze Age field boundaries which flanked the Flag Fen Basin had fallen into disrepair. Just as the initial layout of these features heralded new forms of land tenure and other transformations to the agrarian economy, so too their demise was marked by changing patterns of animal husbandry and the emergence of new social contexts for the consumption and deposition of animal products.

Conventionally viewed as a period of agrarian intensification (Serjeantson 2007, 80), the economy of the earlier first millennium BC was focused almost exclusively on domestic species, with a particular emphasis on cattle and sheep (Albarella & Pirnie 2008; Hambleton 2009), the latter tending to become more dominant during the period (Cunliffe 2005, 415). Though it would be helpful to trace how these broad transformations were materialized in the context of the Bradley Fen/King's Dyke excavations, the lack of faunal remains from the Late Bronze Age means that the discussion must focus exclusively on the Early Iron Age.

At first glance, the Early Iron Age saw apparent radical changes. From a small number of substantial cattle-dominated bone dumps marking the lower ground during the Middle Bronze Age (22 contexts, 729 specimens), to a much wider array of contexts generating smaller quantities of mainly sheep bone in the Early Iron Age (70 contexts, 840 specimens), the shift was visible both in the choice of animals and the manner of deposition. The majority of these small deposits (c. 60%) constituted comparatively small assemblages which focused on the interment of immature and juvenile ovicaprids – faunal deposits particularly associated with the roundhouses and surrounding features at King's Dyke (Fig. 5.32). These sheep-defined contexts yielded 538 assessable fragments, making up c. 65% of the entire Early Iron Age faunal record (Table 5.5).

Table 5.5 *Number of Specimens Identified to Species (NISP) and the Minimum Number of Individuals (MNI) for Early Iron Age features. The abbreviation n.f.i. denotes that the specimen could not be further identified.*

Taxon	NISP	NISP %	MNI
Cow	112	16.3	10
Ovicaprid	466	68	22
Sheep	6	0.9	3
Goat	1	0.2	1
Pig	86	12.5	5
Horse	5	0.7	1
Dog	5	0.7	1
Red deer	5	0.7	1
Sub-total to species	686	100	-
Cattle-sized	45	-	-
Sheep-sized	82	-	-
Mammal n.f.i.	20	-	-
Fish n.f.i.	7	-	-
Total	840	-	-

Ovicaprids

A remarkable 69% of the identified bones were those of sheep/goat. These bones made up the largest proportion of the Early Iron Age assemblage with 473 specimens, representing a minimum of 26 animals. Although a distinction between sheep and goat was not possible for all ovicaprid elements, the examination of clearly diagnostic bones demonstrated the presence of both species in the assemblage, with sheep being the more prolific.

Closer inspection of body part distribution revealed that all parts of mutton carcasses were present on site, with particularly high numbers of radii and tibiae – joints not of the highest meat value, but a good value nonetheless. The presence of non-meat bearing elements in the assemblage are indicative of on-site slaughter which, when added to their neonate/juvenile age, leaves no doubt that lambs were raised in the vicinity of the site, if not on the site itself. In fact, the completeness of the remains of individuals from the King's Dyke roundhouses facilitated assessment of tooth eruption and wear, allowing the lambs' age at slaughter to be determined. This showed that whilst those buried in Roundhouse 14 (F.27 and F.43) had different age ranges, pointing to autumn slaughter and deposition, lambs from Roundhouse 5 (F.496) were aged between three and six months old, placing their interment around summertime/early autumn. Indeed, within the assemblage as a whole, it is clear that the majority of sheep did not survive past their first or second year: epiphyseal fusion data presented in Table 5.6 indicating 34% were <16 months at age of death; 37% were +16 months– <28 months; 27% were +28 months–<3.5 years and 2% were +3.5 years (O'Connor 1988).

Table 5.6. *Number and percentage of fused epiphyses for Early Iron Age ovicaprids (O'Connor 1988).*

Fusion category	No. fused/fusing epiphyses	No. unfused diaphyses	% fused/fusing epiphyses
Early	7	33	18
Middle	7	29	19
Late	1	20	5
Total	15	82	15

Butchery was only recorded on eight ovicaprid remains, all from Roundhouse 14. Apart from fine cut and skinning marks (indicative of disarticulation and carcass preparation with a knife), one ovicaprid vertebra centrum from F.61 had been split down the sagittal plane. This is an interesting butchery technique, associated with separating the carcass into left and right portions.

In terms of overall distribution, it is clear that there is a close relationship between the roundhouses and remains of juvenile sheep at King's Dyke, with at least three of the structures yielding pits and/or postholes crammed with sheep bones (Roundhouse 5, 9 and 14). In actual fact, the faunal remains from these roundhouses make up around two-thirds of the whole assemblage, with Roundhouse 14 yielding close to 50% alone (Table 5.7). This distribution is very striking, but calls for caution, since it is difficult to make wider claims about the nature of economic practices based on a single type of sheep bone deposit, primarily associated with a single structure (Roundhouse 14). Be this as it may, the remains from Roundhouse 14 warrant further attention because of the number and distribution of these distinctive sheep bone deposits.

This structure contained at least six major lamb deposits (F.1, F.27, F.40, F.43–44 and F.61 (Table 5.2)) and combined, yielded only 10 specimens identified to species other than sheep/goat (<1% of the identified count). Not all of these deposits were identical (either in Roundhouse 14 or other structures); some skeletons were partial whilst others were complete and some were only made up of a small number of chosen body parts. However, these were all variations on the same 'theme' involving juvenile sheep remains. Many of these deposits may be termed formal, their 'formality' being visible in their spatial patterning and the fact the remains often 'fill' the features within which they were interred. Examining the plan of Roundhouse 14, it is evident that the majority of bone (by weight and count) derived from features within the centre of the roundhouse (F.27, F.43–44 and F.61). Another interesting aspect of this structure is the interment of lamb remains in postholes forming the elaborate 'porch', as well as on either side of the entrance (Fig. 5.24).

Naturally, it would be extremely difficult, if not impossible, to identify the exact meaning behind these unusual deposits. They could represent the remains of meals which took place during the construction of the roundhouse, or sacrifices being made to ensure the wellbeing of those inhabiting the building – young lambs potentially symbolizing 'new life' being brought into a new space. Age data suggest the lambs were killed in autumn, perhaps strategically before the winter, as not all new-borns survive their first winter. However, the meat yields from lambs would not have been substantial, so it is likely that these meals were consumed by fairly small groups.

Table 5.7. *Number of Specimens Identified to Species (NISP) and the Minimum Number of Individuals (MNI) from Roundhouse 14. The abbreviation n.f.i. denotes that the specimen could not be further identified.*

Taxon	NISP	NISP %	MNI
Cow	1	0.3	1
Ovicaprid	361	99.1	12
Pig	1	0.3	1
Horse	1	0.3	1
Sub-total to species	364	100	-
Cattle-sized	4	-	-
Sheep-sized	15	-	-
Mammal n.f.i.	11	-	-
Fish n.f.i.	7	-	-
Total	401	-	-

Table 5.8. Number of Specimens Identified to Species (NISP) and the Minimum Number of Individuals (MNI) from F.528.

Taxon	NISP	NISP %	MNI
Cow	89	75.4	4
Ovicaprid	3	2.5	1
Sheep	1	0.9	1
Pig	22	18.7	3
Red deer	3	2.5	1
Sub-total to species	118	100	-
Cattle-sized	28	-	-
Sheep-sized	4	-	-
Total	150	-	-

Whatever the exact circumstances, the spatial patterning of the feature with lamb remains in Roundhouse 14 point to some sort of organized depositional practice. Perhaps we should not go so far as to characterize these as 'ritual', but the repetitiveness noted in deposition of remains from one species only, carried out by individuals going back to the same space(s), certainly points to practices which were consciously repeated, time after time.

Cattle

Cattle accounted for just over 16% of the bone identified to species, with a minimum of 10 animals from the site. The great majority of the cattle cohort (c. 80%) came from pit F.528 (Table 5.8). This stands out from the rest of the Early Iron Age assemblage, but resembles some of the earlier and later deposits from the Middle Bronze Age (F.34, F.544 and F.991) and Middle Iron Age (F.802 and F.1018) – in which cattle account for over 70% of the identified species. This suggests a continuation in depositional practice over a long period of time.

In the instance of F.528, cattle elements were large and regularly chopped midshaft (humeri and tibiae), possibly for marrow removal, and vertebrae were split down the sagittal plane. Cattle at an age at death of two, three and four years were recorded, as well as the remains from two juvenile pigs. Due to the changing water-table, the majority of bone had iron panning concretions adhering to the surface, though not a single specimen was gnawed.

Moving onto other features, of the entire cattle cohort, only nine fragments came from roundhouses (8%). A neonate mandible from pit F.480 and the presence of all the parts of a beef carcass indicate that cattle were probably raised either locally or on the site itself. In short, cattle probably played a major part in the community's economy and their secondary importance in this assemblage is most likely due to the assemblage being heavily biased towards sheep-dominated deposits from the roundhouses.

Pigs

With a few exceptions, pigs, like cattle, were found in waterholes at Bradley Fen. Pit F.945 generated 52 specimens (just over 60% of the cohort) with F.528 yielding a further 22. Combined, these two features accounted for almost 90% of the pig component of the assemblage.

A skeletal element count showed all the parts of a pork carcass were present, yet only two elements showed signs of being butchered. A complete tibia gave a shoulder height of 71cm, in the middle of the height range defined by Von den Driesch & Boessneck (1974, 329). No less than three cases of partial anodontia were recorded on mandibles, a trait potentially genetic in origin and probably pointing to the restricted gene pools of local stock. There was no evidence that pigs were used in a more complex way than just for meat and they were likely to have been slaughtered even before they reach maturity, as evidenced by a few juvenile mandibles from F.528 and F.945.

Other domesticates

Just as bones of the three main food species (sheep/cattle/pigs) were almost exclusively derived either from a single deposit type or from a single feature, all five dog specimens were found in pit F.778. These occurred as fragments of mandibles and maxillae found along a complete radius which gave a shoulder height of 58cm, placing it at the top of the predicted size range (Harcourt 1974, 162). Its size suggests the animal was a guard or hunting dog. The last of the domestic species, horse, was positively identified by five specimens only, scattered across both King's Dyke and Bradley Fen.

Wild fauna

Remains of red deer and fish were the only evidence for the exploitation of wild faunal resources. Red deer was identified based on a femur and antler fragments, implying venison was eaten. In contrast with the popular notion of fish avoidance during the Iron Age (Dobney & Ervynck 2007), evidence of fishing and fish remains are far from rare from this landscape (Gibson et al. 2010; Robinson et al. 2015). Although fish bones were not as abundant at Bradley Fen/King's Dyke as at the Must Farm excavations, with only seven fragments recovered, they were nevertheless worthy of note. All seven fragments of fish recovered by hand came from the 'bone-rich' Roundhouse 14, from one of the postholes marking the left side of the entrance, as viewed from outside (F.55). Once more, repeating the pattern noted with sheep, cattle and pigs, the entire fish component came from a single feature.

Discussion

It was a challenge throughout this study to offer interpretations of the site's husbandry regimes based on the small number of remains recovered, as well as the species' appearance in a limited number of contexts/deposit types. To make this task even more difficult, Early Iron Age sites are not well represented in the Basin, making any assessment of how these patterns correspond with the picture of the local Iron Age economy problematic. These caveats aside, a few observations can be made. A brief look at the chart in Figure 5.33 shows that all contemporary sites from the Fenland region have different proportions of species relative to those recorded at Bradley Fen/King's Dyke, with cattle being far more prolific. Although there is little consistency in the ratios from one site to another, cattle appear to be underrepresented in the King's Dyke/Bradley Fen assemblage. This may be because of the high visibility of sheep bone-deposits in structures from the site and the fact that the excavation transect at King's Dyke fell across a part of the (high/dry ground) settlement with numerous buildings. Certainly at both King's Dyke and Tanholt Farm, for instance, sheep remains were very clearly associated with structure-related features, whilst cattle remains were recovered from peripheral fixtures. However, at Pode Hole the relative ratio of cattle, sheep and pig proved to be similar irrespective of feature-type. It is therefore hard to draw any firm conclusions, other than to say that a range of factors – cultural, environmental and taphonomic – may influence these varying trends and the resulting discrepancies observed in Figure

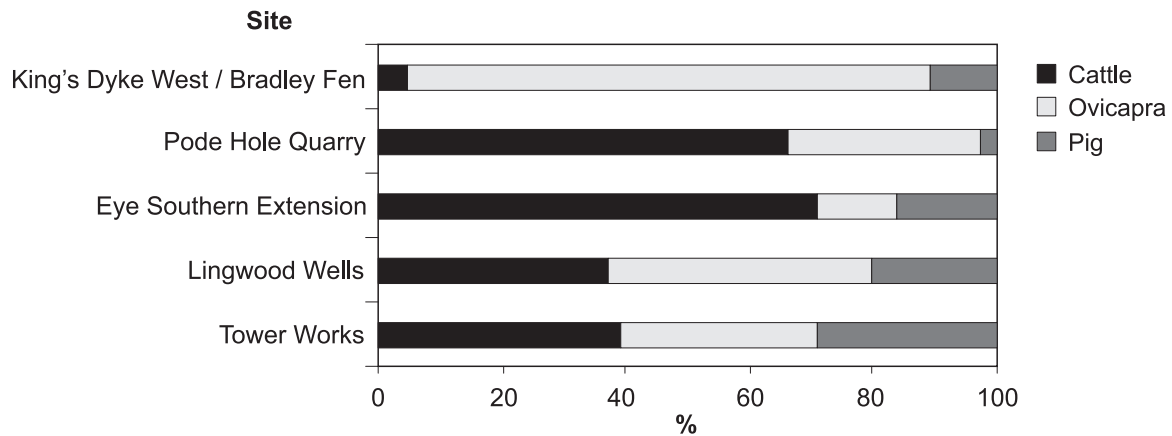


Figure 5.33 Relative importance of species by NISP for the sites used in comparison (Evans 1998; Moreno-García 2009, 195; Rackham 2009; Rajkovača 2009).

5.33. It is clear, however, that context is crucial in understanding these patterns and that different kinds of features in this landscape can give different faunal 'signatures'.

The pottery (Matt Brudenell)

Pottery took on a new social importance at the end of the second millennium BC. The limited repertoire of bucket-shaped jars which characterized the region's Middle Bronze Age potting tradition was superseded by a new and far more diverse range of vessel forms. These included an array of subtly differently shaped shouldered jars, bowls and cups, further sub-divided into coarsewares and finewares based on the character of their fabrics and methods of surface treatment (Barrett 1980). Although a few elements evolved from Deverel Rimbury roots, the emergence of these visual, tactile and functional distinctions between vessel categories was a genuine innovation of the *Post-Deverel Rimbury* ceramic tradition in this region, flourishing across the Late Bronze Age and Early Iron Age, c. 1100–350 BC (Brudenell 2012).

These transformations reflect significant shifts in the way ceramic containers were deployed for cooking and consumption practices in settlement contexts – settings where occupation was becoming increasingly persistent. Put succinctly, these were repertoires tailored to new forms of dining in new kinds of social settings. Indeed, the changes in the settlement and ceramic record were closely related, with both becoming far more visible, archaeologically speaking, from the Late Bronze Age onwards. This not only reflects the more prominent role of pottery in culinary activities in this period, but also a pronounced shift in the way the residues of these practices were managed within settlement contexts. Although the combined pottery

assemblage from King's Dyke/Bradley Fen is fairly small by contemporary standards (916 sherds, 6692g), it provides some important insights into the nature of culinary practice, particularly with regard to the role that certain ceramics played in formal dining in the Early Iron Age and the treatment these pots received in deposition.

Assemblage characteristics

The pottery was recovered from a wide range of features, with the vast majority deriving from roundhouse-related contexts at King's Dyke and waterholes at Bradley Fen (Figs 5.31 & 5.32). In total, 22 fabric types were distinguished in the assemblage, belonging to 11 major fabric groups (Table 5.9 & 5.10). Shelly wares dominated, as they did in the Middle Bronze Age (Fig. 5.34A), but a more diverse range of fabric recipes were now deployed – the ingredients for all of which were potentially available in the local landscape (particularly shell-rich Jurassic clays). The way these were prepared and mixed was partly conditioned by the type of vessels being produced and, ultimately, the role which they were intended to serve.

The Bradley Fen/King's Dyke later prehistoric pottery fabric series

Shell fabrics

- S1: Moderate to common coarse and very coarse shell/voids (mainly 2–4mm in size). Fabric can have a slightly silky texture.
- S2: Sparse to common medium shell/voids (mainly 1–2mm in size). Fabric can have a slightly silky texture and possibly contains fine grog/clay pellets. Rare examples also have sparse linear voids from burnt out vegetable matter.
- S3: Sparse to moderate fine shell/voids (mainly <1mm in size).

Shell and flint fabrics

- SF1: Moderate fine and medium shell (<1.5mm in size) and sparse fine and medium flint (<1.5mm in size).

Shell and sand fabrics

- SQ1: Moderate to common coarse and very coarse shell/voids (mainly 2–4mm in size) with moderate sand.
- SQ2: Common medium shell/voids (mainly 1–2mm in size) with moderate sand.
- SQ3: Sparse to moderate fine and medium shell/voids (mainly 1–1.5mm) and sparse to common sand.

Table 5.9. Late Bronze Age pottery: fabric frequency, and its relationship to burnishing and vessel counts. MNV = minimum number of vessels, calculated as the total number of different rims and bases.

Fabric	Fabric group	No./wt (g) sherds	% fabric (by wt)	No./wt (g) burnished	% fabric burnished (by wt)	MNV	MNV burnished
F1	Flint	3/13	1.2	-	-	-	-
FQ1	Flint & sand	6/54	5.2	-	-	-	-
Q1	Sand	3/13	1.2	1/7	53.8	1	1
Q2	Sand	3/18	1.7	1/4	22.2	1	-
QI1	Quartz & sand	5/44	4.2	-	-	-	-
S1	Shell	85/619	59.4	2/18	2.9	3	-
S2	Shell	37/119	11.4	4/22	18.5	-	-
S3	Shell	3/21	2.0	-	-	2	-
SF1	Shell & flint	2/4	0.4	-	-	-	-
SG1	Shell & grog	2/63	6.0	-	-	2	-
SG2	Shell & grog	1/30	2.9	-	-	-	-
SQ1	Shell & sand	6/39	3.7	-	-	-	-
SQ3	Shell & sand	1/5	0.5	-	-	1	-
Total	-	157/1042	99.8	8/51	4.9	10	1

Table 5.10. Early Iron Age pottery: fabric frequency, and its relationship to burnishing and vessel counts. MNV = minimum number of vessels, calculated as the total number of different rims and bases.

Fabric	Fabric group	No./wt (g) sherds	% fabric (by wt)	No./wt (g) burnished	% fabric burnished (by wt)	MNV	MNV burnished
F1	Flint	3/41	0.7	-	-	1	-
F2	Flint	2/6	0.1	-	-	-	-
FQ1	Flint & sand	1/24	0.4	-	-	-	-
FQ2	Flint & sand	3/24	0.4	1/9	37.5	1	-
FQ3	Flint & sand	5/46	0.8	2/36	78.3	1	1
G1	Grog	56/285	5.0	35/227	79.6	3	2
Q1	Sand	7/33	0.6	3/17	51.5	-	-
Q2	Sand	16/122	2.2	2/4	3.3	2	-
QG1	Sand & grog	5/53	0.9	-	-	-	-
QI1	Quartz & sand	1/1	<0.1	-	-	-	-
QI2	Quartz & sand	2/59	1.0	-	-	1	-
QSG1	Sand, shell & grog	8/55	1.0	2/33	60.0	2	1
S1	Shell	258/1386	24.5	34/114	8.2	9	2
S2	Shell	203/1670	29.6	2/18	1.1	9	1
S3	Shell	128/1138	20.1	34/259	22.8	8	4
SG3	Shell & grog	7/26	0.5	-	-	1	-
SQ1	Shell & sand	1/10	0.2	-	-	-	-
SQ2	Shell & sand	7/72	1.3	-	-	-	-
SQ3	Shell & sand	44/597	10.6	14/329	55.1	8	2
?	Unassigned	2/2	<0.1	-	-	-	-
Total	-	759/5650	99.9	129/1046	18.5	46	13

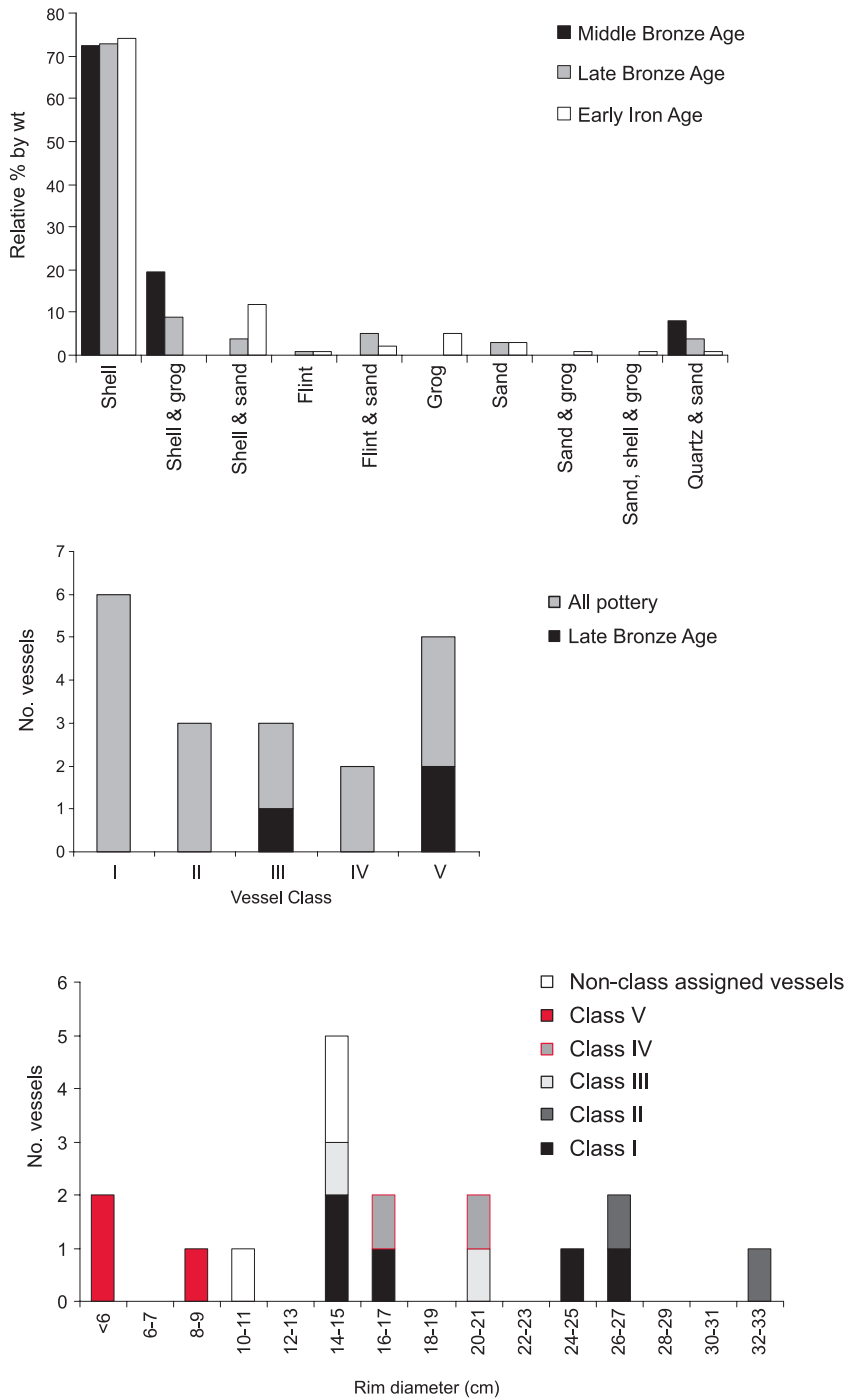


Figure 5.34. *Fabrics, vessel classes and rim diameters. A. Fabric preference through time: comparison of Middle Bronze Age to Early Iron Age fabrics group frequencies (for groups accounting for more than 1% of period assemblages by weight). All are dominated by shelly wares (>70%), though the Late Bronze Age and Early Iron Age assemblages display a greater range of 'minor' fabric groups; B. Vessel Class quantification (series after Barrett 1980). I = coarseware jars; II = burnished fineware jars; III = coarseware bowls; IV = burnished fineware bowls; V = cups; C. Diameter of all measurable vessel rims (17 by vessel count).*

Shell and grog fabrics

SG1: Moderate coarse and very coarse shell (mainly 2–4mm in size) and moderate coarse grog (mainly 2–3mm in size).

SG2: Moderate to common medium and coarse shell (mainly 1–3mm in size) and moderate medium to coarse grog (mainly 1–3mm in size).

SG3: Silky textured fabric with moderate fine shell/voids (mainly <1mm) and moderate medium grog (mainly 1–2mm in size).

Sand fabrics

Q1: Moderate to common sand; abrasive to touch.

Q2: Sparse to moderate sand; some with rare to sparse mica.

Q3: Moderate sand with rare fine to medium unburnt flint and quartz (<1.5mm in size).

Sand and grog fabrics

QG1: Moderate sand with sparse or moderate fine or medium grog (mainly <1.5mm in size).

Sand, shell and grog fabrics

QSG1: Hard fabric with sparse to moderate sand, sparse to moderate fine shell/voids (<1.5mm in size) and sparse fine to medium grog (<1.5mm in size).

Grog fabrics

G1: Soapy fabrics with fine and medium grog (mainly <1.5mm in size).

Flint fabrics

F1: Moderate to common medium and coarse flint (mainly 1–3mm in size).

F2: Sparse fine and medium flint (mainly 1–1.5mm in size).

F3: Sparse medium flint (mainly 1–2mm in size) and sparse fine voids (<1mm in size).

Flint and sand fabrics

FQ1: Moderate to common coarse and very coarse flint (mainly 2–4mm in size) and moderate to common sand.

FQ2: Sparse to moderate medium flint (mainly 1–2mm in size) and moderate sand.

FQ3: Moderate finely crushed flint (mainly <1.5mm in size) with moderate sand.

Quartz and sand fabrics

Q1: Moderate medium and coarse quartz (mainly 1–3mm in size) and moderate sand.

Q2: Rare to sparse medium and coarse quartz (mainly 1–3mm in size) and moderate sand.

The coarsewares, for instance, were mostly made with clays containing coarse, poorly sorted shell, sometimes combined with other ingredients: coarse flint, grog, quartz and/or sand. As well as functioning as an opening agent in the clay, allowing water to escape during drying and firing, these coarse inclusions brought stability when constructing larger vessels. They also provided the pots with a very different tactile aesthetic (rough, abrasive surfaces) to those of the burnished finewares (smooth, glossy). The clays used to fashion finewares generally contained well-sorted, often uniformly ground inclusions, such as a fine flint, grog, shell, or sand. These aided the production of thin-walled vessels and a range of delicately moulded features: everted and/or tapered rims, sharply angled shoulders, dimples and omphalos bases. It also facilitated burnishing, which not only made the pots visually distinct from their coarseware counterparts, but enabled them to hold liquids/beverages. In total there were 137 (1097g) burnished fineware sherds in the assemblage. By period, 129 (1046g) of these dated to the Early Iron Age, accounting for 17.0% of this sub-assemblage by sherd count, or 18.5% by weight. This compared to figures of just 5.1% by count/4.9% by weight for the Late Bronze Age (based on eight sherds, 51g). Although this discrepancy seems quite marked, both sets of figures are entirely consistent with regional averages calculated for Eastern England (see Brudenell 2012, 262, 270, tables 7.1–7.2).

Based on the total number of different rims and bases identified, the assemblage is estimated to include a minimum of 56 different vessels (36 different rims; 13 different bases; seven complete profiles). Of these, 46 were dated to the Early Iron Age (c. 800–350 BC), with the Late Bronze Age component (c. 1100–800 BC) comprising just eight different rims, one base and one complete profile. With regard to forms, the repertoire of vessels was fairly typical of this period: shouldered jars, open and/or angular profiled bowls and cups (Barrett 1980). In total, 16 vessels were sufficiently intact to allow ascription to form and Class (Table 5.11, Figs 5.34B & 5.35). This included 230 sherds (2307g), representing around a quarter to a third of the assemblage by sherd count (25%), weight (34%) or vessel count (29%).

Further discussion of form frequencies is unwarranted given the number of vessels involved. As far as can be discerned, however, most the coarsewares sherds in the assemblage belonged to jars (rim diameter range 14–32cm; Fig. 5.34), whereas the majority of burnished fineware sherds were from cups and bowls (rim diameter

range 4–20cm). Jars probably served a variety of roles in cooking and storage, with soot marks and carbonized food crusts recorded on four form-assigned jars (rim diameter 14–24cm, forms G, H and I) and a total of 21 coarsewares sherds (427g). By contrast only one burnished sherd (29g) retained traces of sooting, supporting the notion that coarsewares and finewares had different functional roles in culinary practice: the former being cooking and storage vessels, the later tablewares for serving.

The finewares in this context were predominantly plain; exclusively so in the Late Bronze Age sub-assemblage. Present in the Early Iron Age assemblage, however, were fragments of three decorated ‘Fengate-Cromer’ style fineware bowls (17 sherds, 202g, Fig. 5.35 nos. 6 and 13–14), each adorned with elaborate curvilinear or geometric motifs below the shoulder (Cunliffe 2005, 94–96). These vessels – each having been carefully fired to produce a consistent

Figure 5.35 (opposite). *Late Bronze Age and Early Iron Age pottery. 1–4. Late Bronze Age, Bradley Fen; 5. Late Bronze Age, King’s Dyke; 6–12. Early Iron Age, Bradley Fen; 13–24. Early Iron Age, King’s Dyke.*

1. F.335 [264], Form J, Class III, Fabric S3
2. F.691 [652], Form X, Class V, Fabric SG1
3. F.433 [383], Fabric SQ3
4. F.433 [383], Fabric Q2
5. F.84 [84], Form T, Class V, burnished, Fabric Q1
6. F.778 [781], Fabric S3, burnished, incised geometric motif on the belly
7. F.945 [1004], Form H, Class I, Fabric S3, fingertip impression rim-exterior and slashed shoulder
8. F.947 [1006], Form I, Class II, Fabric FQ3
9. F.1121 [1218], Fabric S3, burnished
10. F.1121 [1218], Fabric SQ3, incised horizontal lines on the neck
11. F.480 [433], Form B, Class IV, Fabric SQ3
12. F.480 [433], Fabric S3
13. F.61 [61], Form N, Class IV, Fabric S3, bands of grooved diagonal and curvilinear lines separated by dimples
14. F.316 [326], Fabric S3, burnished, incised horizontal and curvilinear lines and dimples
15. F.208 [208], Form E, Class I, Fabric SQ3, fingertip impressions on the shoulder
16. F.730 [856], Form F, Class I, Fabric F1, fingertip impressions on rim-interior and shoulder
17. F.66 [66], Form F, Class II, Fabric S1
18. F.66 [66], Form H, Class I, Fabric S1, fingernail impressions on rim-exterior
19. F.66 [66], Form K, Class III, Fabric S2, burnt
20. F.495 [540], Form G, Class I, Fabric S2, fingertip impressions on the shoulder, burnt
21. F.495 [540], Fabric S1, fingertip impressions on the shoulder
22. F.495 & F.495 [540 & 541], Form I, Class I, Fabric S2, burnt
23. F.496 [541], Form U, Class V, Fabric SQ3, burnt
24. F.540 [590], Form F, Class II, Fabric G, burnt

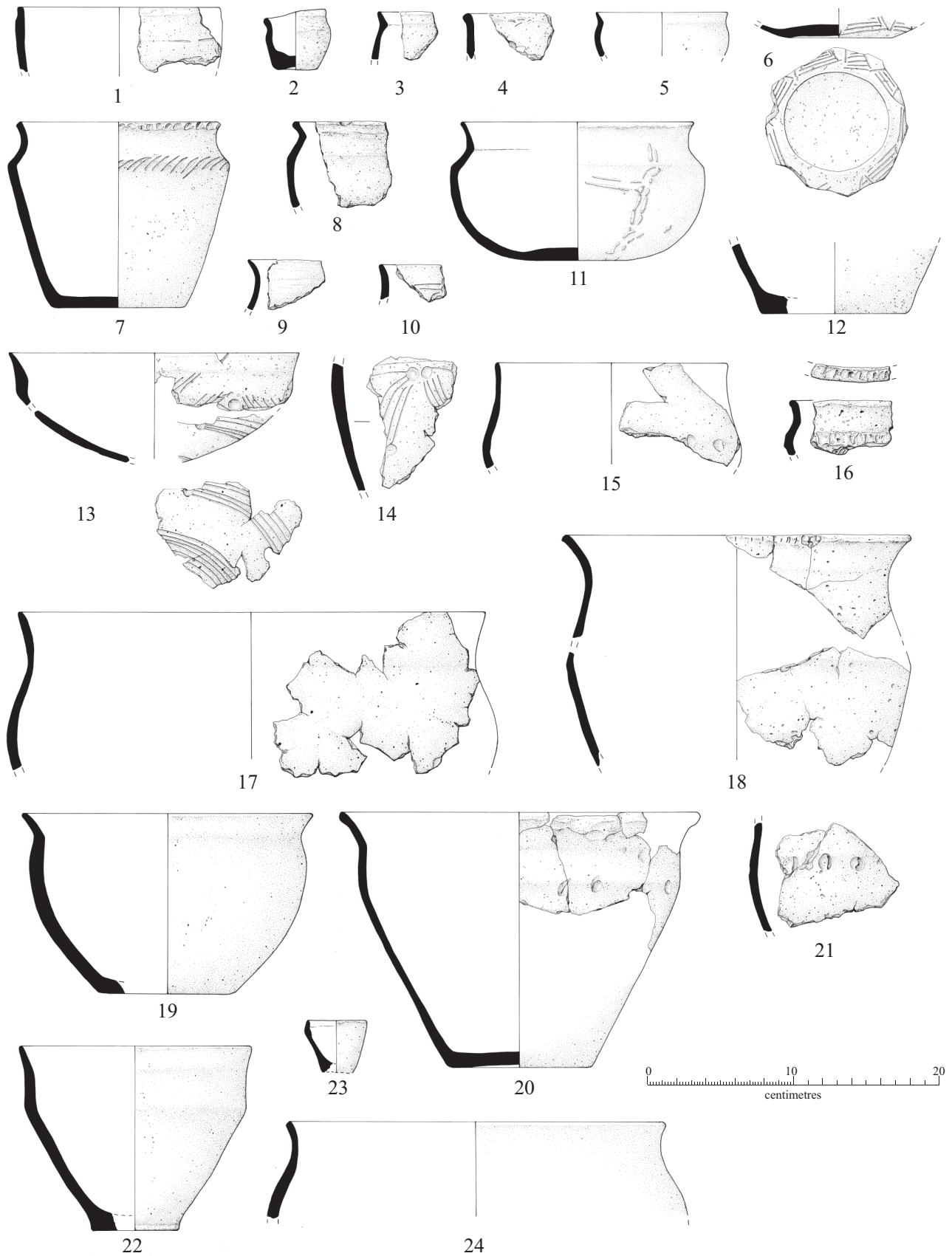


Table 5.11. *Quantification of vessel forms (series after Brudenell 2012, 120–22, fig. 4.1). * Late Bronze Age vessels.*

Form	Brief description	No./wt. (g) sherds	No. vessels	No. burnished	Rim diam. (cm)
E	Jar, bipartite	2/32	1	-	16
F	Jar, high rounded shoulder	69/357	3	2	26–32
G	Jar, weakly shouldered, upright neck	32/411	1	-	24
H	Jar, marked shoulder, hollowed neck	60/773	2	-	14–26
I	Tripartite jar, marked or angular shoulder	20/229	2	1	15
J*	Bowl, open, broadly hemispherical	1/17	1	-	14
K	Bowl, round-bodied	17/117	1	-	20
N	Bowl, tripartite, angular shoulder	24/290	2	2	16–20
T*	Cup, round body, everted rim	1/7	1	1	9
U	Cup, bipartite	3/19	1	-	4
X	Cup, shouldered	1/55	1	-	5
Total	-	230/2307	16	6	4–32

dark grey finish – stood out within the assemblage, even against the other burnished finewares. The most complete bowl derived from the foundation-type deposit in pit F.61 (Roundhouse 14) where it was found immediately above a dump of lamb bones (Fig. 5.35, no. 13). Fragments of the second vessel were recovered from the entrance of Roundhouse 9 (F.316, Fig. 5.35, no. 14) and may also have constituted a formal deposit. This is harder to argue for the third vessel from pit/waterhole F.778 at Bradley Fen, though interestingly, the base of this decorated bowl had been trimmed flat, almost as if to create a platter (Fig. 5.35, no. 6). There is certainly the suggestion that these distinctive pots were singled out for particular forms of treatment, potentially because of the values attached to them and the roles they played in dining: ideas explored further below.

Aside from these Fengate-Cromer-style bowls, there were also three leached sherds from different pots displaying grooved horizontal lines (15g; two on the shoulder, one on the neck). These may originally have belonged to finewares, though their surfaces had been completely abraded making them hard to classify (e.g. Fig. 5.35, no. 10). Decoration on the ‘true’ category of coarsewares seems to have been restricted to jars. Moreover, with the exception of two plain Late Bronze Age cordoned sherds (27g), all the decorated pieces were of Early Iron Age origin (26 sherds, 658g). In this sub-assemblage, decorative techniques included slashing and various forms of finger treatment (finger-tipping, nail impressions and pinching); these being applied to the neck, rim and/or shoulder of the coarsewares.

Generally speaking decorative frequencies were relatively low in this context, with only three of the 34 different Early Iron Age vessels’ rims adorned. This amounts to a figure of just 9% or, if adjusted to include only coarsewares rims, 13% (3 out of 23 different rims). Such frequencies are far lower than that calculated for contemporary assemblages from Tower Works, Vicarage Farm or pottery from the Pre-War Gravel Pits at Fengate (Brudenell with Hill 2009, 189). These differences may reflect the fact that the Bradley Fen/King’s Dyke material spans the whole of the Early Iron Age, c. 800–350 BC (a range supported by the two radiocarbon dates obtained), whereas that from Tower Works, and most pottery from the Pre-War Gravel Pits, probably dates to just the *Earliest* Iron Age, c. 800–600/550 BC: a period where rim decoration frequencies in Eastern England normally exceed the 20% mark (Brudenell 2012, 191, table 5.13).

That being said, chronology is not the only factor influencing the occurrence or incidence of decoration in any given pottery group. Here it should be noted that out of the maximum of 14 different decorated coarseware vessels in the Bradley Fen/King’s Dyke Early

Iron Age assemblage, six (roughly half) derived from just three features. Moreover, in each instance these deposits contained one or more semi-complete pots, which appear to have been singled out for formal deposition. The basic implication is that decorated vessels, including both coarsewares jars and fineware bowls, were more often the recipients of formal treatment in these acts than other kinds of vessel. There are certainly a disproportionate number of them in such contexts at Bradley Fen/King’s Dyke and even in the instances where the substantially complete pots were plain, these were often found alongside small fragments of decorated wares. The argument developed here is that these decorated pots were often caught up in formal deposits of one kind or another, because of the roles they played and, more significantly, the contexts of formal dining in which they featured.

Deposition and formal dining: feasts, finewares and decorated pots

In many respects, it is hard to make any substantive statements about the roles of pots in everyday culinary activities at Bradley Fen/King’s Dyke. Although we can take it as axiomatic that pots were used to prepare and serve meals on a day-to-day basis, our understanding of how these practices were organized in this particular context is far from clear. In truth, the assemblage is small and rather fragmentary, providing few insights into these dynamics. In fact, out of the 110 features yielding non-residual pottery, 82 had fewer than 5 sherds. The vast majority of small assemblages (Table 5.12, weighing <250g) comprise a mixed handful of sherds from different vessels in different states of fragmentation. This is fairly typical of most deposits of PDR pottery (Brudenell & Cooper 2008), whose attributes speak more directly to issues surrounding everyday refuse maintenance, than they do those concerning dining. Of course, it is possible to make observations about culinary practice based on the material from such mixed deposits. This, however, normally requires there to be more pottery *overall* to enable discussions of vessel composition, or patterning

Table 5.12. Pottery deposit size and frequency (excluding residual sherds).

Deposit size	Weight range	No. of features		% of features	
		Late Bronze Age	Early Iron Age	Late Bronze Age	Early Iron Age
Small	0–100g	4	91	50	89
Medium	101–250g	2	6	25	6
	251–500g	2	2	25	2
Large	501–1000g	-	2	-	2
	1000g+	-	1	-	1
Total	-	8	102	100	100

in the rim diameter and residue data. This is clearly beyond the scope of the material at hand, mainly because large dumps of midden-derived pottery are absent from the features revealed; these presumably falling outside the excavation transect.

Despite these drawbacks, there are moments when the ceramic residues of single set-piece dining events come into sharper relief on the site. These are instances where we find single semi-complete pots or groups of vessels alongside dumps of animal bones and/or querns. In total, there are at least five such deposits from the excavations, including two associated with the King's Dyke roundhouses and two from the lower fills of waterholes at Bradley Fen (Table 5.13). These appear to reflect moments of formal dining, in which the occasion ended with the deposition of all or select parts of the detritus generated, including elements of the ceramic repertoire. Whether or not it is appropriate to label these feasts is a matter of debate, given most were probably small-scale gatherings. What we can say is that these practices were probably structured very differently from those associated with routines of everyday food preparation and consumption, as were the treatments afforded to the remains of those activities.

Closer inspection of these assemblages reveals some sense of pattern to the vessels involved, even if

they represent only select elements of those vessels used/broken (perhaps deliberately) in these events. As already noted above, there appears to have been some bias in favour of fineware vessels and decorated pots in these contexts. This might suggest an emphasis on visual display, or the provision of vessels suitable for holding and serving beverages, perhaps alcohol. It may even be the case that some kinds of pots, such as the decorated Fengate-Cromer style finewares, were reserved for use in these formal occasions. As ceramics which stood-out, their deployment would have served to create a different kind of dining aesthetic, helping to set these meals apart. Certainly, if these pots did have a more prescribed role in formal dining, recognized amongst the wider community, it would go some way to explaining why we can identify geographical 'style-zones' from these vessels, but not other types of contemporary pot.

Although debates about the nature and meaning of style-zones are beyond the scope of this report, it is important to consider how these patterns compare with deposits on other sites in the Flag Fen Basin. In this context, it is the pottery group from pit F.495/6 in Roundhouse 5 which finds ready comparison with several other deposits on sites in the local landscape. This assemblage comprised fragments of seven freshly broken vessels, including three semi-complete pots: a

Table 5.13. Early Iron Age formal pottery deposits involved single semi-complete vessel or vessels sets. Combined, these five assemblages account for over a third of all the Early Iron Age pottery recovered (48% by sherd count, 55% by weight and 37% by vessel count).

Feature no./site	Context	No./wt (g) sherds	MNV	Assemblage characteristics
F.61/KD	Pit, RH14	21/103	1	Semi-complete Fengate-Cromer style decorated fineware bowl (Figure 5.35, no. 13)
F.66/KD	Pit	120/678	6	Vessel set, including a partially intact fineware jar, a partially intact decorated coarseware jar and a semi-complete but burnt/re-fired coarseware bowl (Figure 5.35, nos 17–19)
495/6/KD	Pit, RH 5	177/1413	7	Vessel set, including two semi-complete coarseware jars (one decorated) and a cup, all partially burnt/re-fired (Figure 5.35, nos 21–23)
F.480/BF	Waterhole	38/371	2	Semi-complete fineware bowl, and the base of a jar (Figure 5.35, nos 11–12)
F.945/BF	Waterhole	9/553	1	Semi-complete decorated coarseware jar (Figure 5.35, no. 7)

cup, a small plain tripartite jar and a large fingertip decorated jar. The repertoire has much in common with Middle and Late Bronze Age 'feasting sets' discussed by Ann Woodward (1999, 6–8). These were identified as comprising one or more large ceramic containers, suitable for cooking or serving a communal meal, and various smaller jars, bowls and cups for individual consumption.

The character of the assemblage from F.495/6 certainly invites a similar interpretation and, more importantly, has parallels with other Early Iron Age vessel sets found in the Flag Fen Basin. These sets are particularly well represented in the Pre-War Gravel Pit assemblage from Fengate, collected by Wyman Abbott at the beginning of the twentieth century (Hawkes & Fell 1945, especially Pits C, K, R, S, U and Y). Notable amongst the various pit groups is the elaborately decorated set of Fengate-Cromer style pots from Pit R, which included a series of substantially intact finewares bowls, cups and large jars. As in some of the formal pottery deposits at Bradley Fen, this and other vessel sets from the site were interred in large pits, the dimensions of which suggest that they were probably also waterholes (Brudenell et al. 2009, 235).

Another detail linking these formal pottery deposits is the presence of burnt sherds. Several of the pots in the Pit R group and others from this area show signs of intensive burning after breakage; an attribute shared by the material from F.495/6. This could be a coincidence. Alternatively, it may be that the breakage and burning of vessels in these settings formed part of the performances at the close of formal dining events. This interpretation certainly has its attractions, all the more so since similar vessel sets at Tower Works and Tanholt Farm have also been found to have been burnt (Fig. 5.36). In fact, in terms of size, the pottery group from pit F.20 at Tower Works is very similar to that from F.945/6 at King's Dyke: both contained seven vessels including large burnt decorated jars (Brudenell with Hill 2009, 191).

Whether or not this implies that two events were pitched at similar social scales is more difficult to gauge. The important point is that these practices were not unique to the Bradley Fen/King's Dyke context and can be paralleled around the Basin. In fact, there are similar examples from further afield in southern Britain, which hint that these practices were more widely acknowledged (e.g. pots in the waterhole complex 136194 at Perry Oaks, Middlesex (Lewis et al. 2006, 148)). Individually, the size and composition of each vessel set is slightly different, as is the precise manner of the treatment afforded to the remains in deposition. Nonetheless, there is regularity in the practices, suggesting they were guided by broadly similar concerns

and understandings. There is also a sense of pattern to the kind of vessel deployed in these circumstances, with services normally weighted in favour of finewares, profusely decorated coarsewares and/or large to very large-sized jars: the ceramic paraphernalia of feasting.

The carbonized plant remains (Anne de Vareilles)

From the 48 samples analysed from 33 features across Bradley Fen and King's Dyke, a very limited array of archaeobotanical evidence was uncovered. Low concentrations of carbonized plant remains are not unusual in prehistoric settlements where food and its waste, for reasons which must remain speculative, were not charred and buried as frequently as in later periods. Nevertheless, the cereals and wild plant seeds offer an exclusive insight into a forgotten agricultural landscape and the crops that helped shape and sustain an economy.

The samples covered Roundhouses 4, 5 and 14, as well as pits F.433 near Roundhouse 4 and F.66 west of Roundhouse 14 (Table 5.14 & 5.15). The plant remains were concentrated within the dwellings where charred grain and associated seeds were mostly found in the interior pits rather than the ring-gullies and postholes. These were richest in Roundhouse 5 and 14 where there may be evidence for the cleaning/preparation and consumption of cereals, fruits and tubers. That being said, the total numbers of plant remains are low (44 cereal grains, 55 glume bases and rachis internodes and 65 possible arable weed seeds), and one wonders if the waste generated by such activities (mainly cereal chaff and weeds) was not usually saved as animal fodder.

Barley (*Hordeum* sp.), spelt (*Triticum spelta*) and emmer wheat (*T. dicoccum*) were the main cereal crops. An oat grain (*Avena* sp.) was found within Early Iron Age Roundhouse 14 but, without its chaff, could not be ascribed to either the cultivated or a wild variety. Even if oats were not cultivated they were probably an encouraged weed, being a favourable addition to the final crop product. Emmer and barley are common early prehistoric British crops, whilst spelt became more popular during the Iron Age (Greig 1991; Jones 1981; 1996). The use of spelt is evident from the Bronze Age in Fenland archaeology and its rapid preference over emmer is unsurprising (cf. Evans & Knight 2000; Stevens 2009). Spelt requires the same processing techniques as emmer but can grow on heavier soils and is a hardier plant, less prone to the detrimental effects of cold, wind, diseases and pests (Jones 1981).

Despite the low numbers of grains it seems unreasonable to conclude 'that cereals were of minor importance', as was suggested for Cat's Water (Wilson 1984, 242). There is evidence for the storage of crops (six four-post structures in total) and small legumes found in Early Iron Age Roundhouse 14 could be signs of the

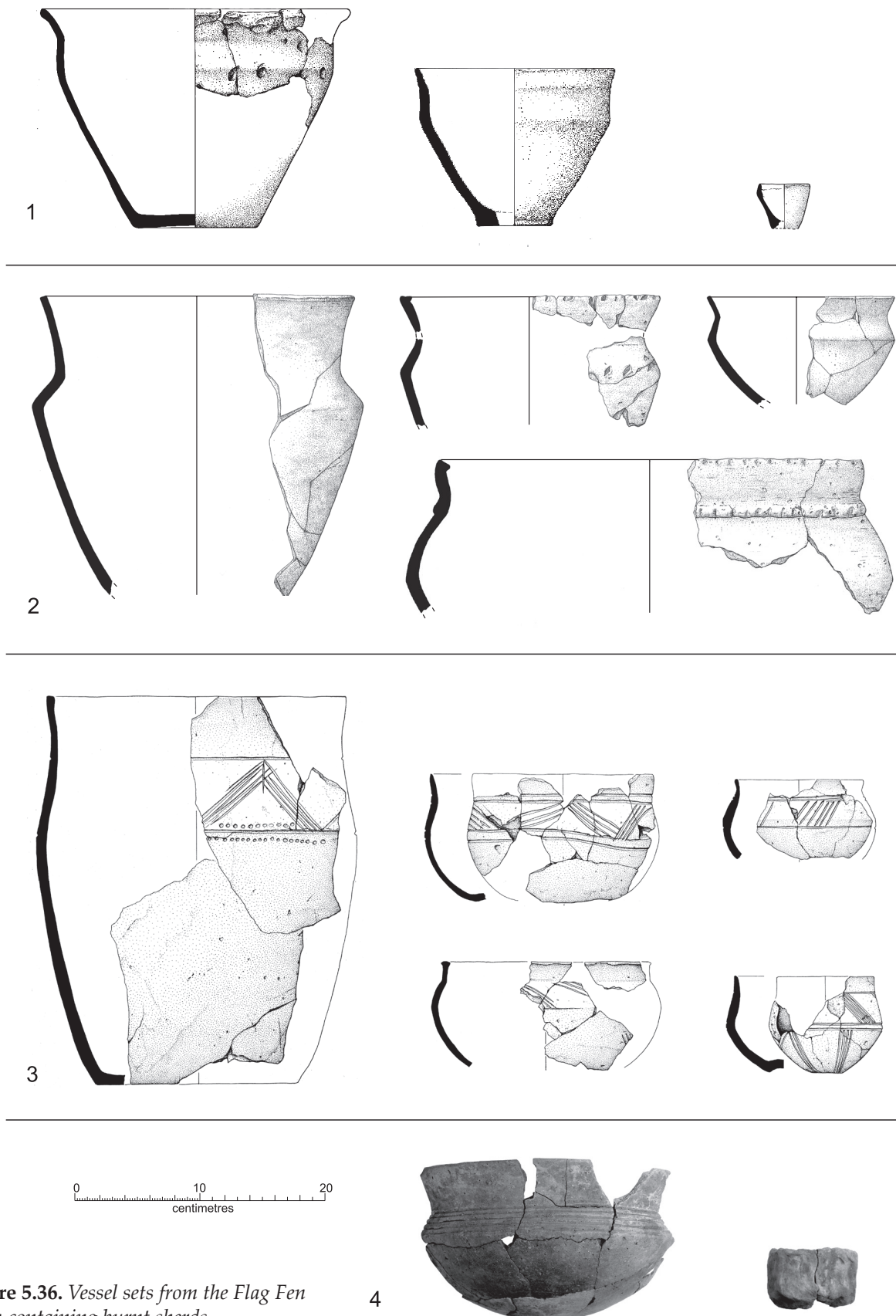


Figure 5.36. Vessel sets from the Flag Fen Basin containing burnt sherds.

Table 5.14. Late Bronze Age charred soil samples from Bradley Fen. ‘-’ 1 or 2; ‘+’ <10; ‘++’ 10–50; ‘+++’ >50 items. P = present. 100% of each flot fraction was examined.

Context			388	389	390	392	394	396	397	398	391	395	399	383
Feature			437	438	439	441	443	445	446	447	440	444	448	433
Feature type			Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Pit
Structure			RH 4											-
Sample volume (litres)			1.5	1.5	1.5	1.5	1	1	1	1	1	1	1	8
Cereal grains & chaff	<i>Triticum / Hordeum</i>	Wheat/ barley												1
	Cereal grain indet.						1							
	<i>Triticum spelta</i> glume base	Spelt chaff								1				
Other residues	Large charcoal (>4mm)													++
	Med. charcoal (2–4mm)			-	-		-							++
	Small charcoal (<2mm)		++	++	++	+	++	+	++	+	+	-	+	++
	Vitrified charcoal						-				-			
	Bone fragments		-											
	Burnt bone frags.						-							+
	Pottery sherds													-
	Burnt stone													-
	Modern contamination (roots, seeds etc.)		P	P	P	P	P	P	P	P	P	P	P	P

prolonged and intensive use of arable soils. Legumes are nitrogen-fixing plants and prosper on soils of low fertility. The continuity between the Bronze Age and the Early Iron Age arable weeds indicates that the same sandy, relatively well-drained soils were in continuous use and may therefore have become depleted in many minerals. Cleavers (*Galium aparine*) found with vetches and/or wild peas (*Vicia/ Lathyrus*) may suggest that crops were sown in the autumn (Stevens 1996), although some spring sowing was perhaps also undertaken. Given the growing threat of flooding, drier soils suitable for autumn sowing must have been increasingly difficult to find. Indeed the reorganization of the surrounding fieldsystem in the Iron Age may have been influenced by the need for renewed soil fertility and drier, more efficiently drained fields. Nitrogenous plants were not found in Middle Iron Age samples (see Chapter 6), perhaps relating to the appropriation of new arable fields, or, with the gradual loss of land to the ever encroaching fen, a shift in soil management to include a more intensive system of manuring and crop rotation.

Seeds of blinks (*Montia fontana* ssp. *minor*), lesser spearwort (*Ranunculus flammula*), lady's mantle (*Alchemilla vulgaris*), common marsh-bedstraw (*Galium palustre*), sedges (*Carex* sp.), spike-rushes (*Eleocharis* sp.) and rushes (*Juncus* sp.) suggest that damp soils were also cultivated. These were not heavy, clay-rich soils but damp fields, areas probably closest to streams, where the water-table must have risen to ground level in the spring. Although the surface rhizomes of sedges are sensitive to ploughing, Bronze Age and Early Iron Age tools and techniques are likely to have been less intrusive and more precise. The frequent occurrence of sedge nutlets within prehistoric arable assemblages has led to the conclusion that these were probably arable weeds of damp soils (cf. Jones 1984; Stevens 2007). The occurrence of meadow and forage grasses (*Poa* sp. and *Phleum* sp.) 'indicate relatively poor tillage by ard, and/or perhaps by hand, and might also suggest that the fields were previously undergrazed grassland' (Stevens 2007, 62).

Remnants from the consumption of edible plants were found in the form of fruit and tuber parenchyma

Settlement in the post-fieldsystem landscape

Table 5.15. Early Iron Age charred soil samples from King's Dyke. '-' 1 or 2; '+' <10; '++' 10–50; '+++' >50 items. P = present. 100% of each flot fraction was examined.

Context no.			27	61a-i	61o-v	66	468	470	472	474	476	478	480	482	503	507	511	516	518	519
Feature no.			27	61	61	66	441	441	441	441	441	441	441	441	459	463	476	472	474	475
Feature type			Pit	Pit	Pit	Pit	Wall trench								Ph	Ph	Ph	Ph	Ph	Ph
Structure			RH 14				RH 5													
Sample volume (litres)			5	10	6	8	1	1	2	2	1	1	1	1	1	1	2.5	2	1.5	1.5
Cereal grains & chaff	<i>Hordeum</i> sp.	Barley grain																		
	<i>Triticum</i> cf. <i>spelta</i>	Spelt wheat grain	3																	
	<i>Triticum</i> cf. <i>dicocum</i>	Emmer wheat grain															1			
	<i>Triticum spelta</i> / <i>dicocum</i>	Spelt or emmer wheat			16															
	<i>Triticum</i> sp.	Wheat type indet.			2															
	<i>Avena</i> sp.	Wild or domesticated oat	1																	
	Cereal grain indet.				11															
	<i>Triticum spelta</i> glume base	Spelt chaff			2															
	<i>T. dicocum</i> glume base	Emmer chaff			2															
	<i>Triticum</i> sp. glume base	Glume wheat chaff	7		21	1														
	<i>Triticum</i> sp. spikelet fork	Glume wheat chaff																		
	6-row <i>Hordeum</i> sp. rachis internode																			
	<i>Hordeum</i> sp. rachis internode																			
Non cereal seeds	<i>Chenopodium album</i> L.	White campion																		
	<i>Chenopodium</i> sp.	Goosefoots																		2
	<i>Ilex aquifolium</i> L.	Holly																		
	<i>Atriplex patula</i> / <i>prostrata</i>	Oraches																		2
	<i>Montia fontana</i> ssp. <i>minor</i> Hayw.	Blinks															1			
	<i>Stellaria</i> sp.	Chickweed																		1
	small Caryophyllaceae indet.	Seeds of Pink family															2			
	<i>Crataegus monogyna</i> Jacq.	Hawthorn				1														2
	<i>Vicia</i> / <i>Lathyrus</i> sp.	Vetches / Wild Pea																		1
	<i>Galium aparine</i> L.	Cleavers																1		
	<i>Eleocharis</i> sp.	Spike rushes	2																	1

Table 5.15 (cont.).

Context no.			27	61a-i	61o-v	66	468	470	472	474	476	478	480	482	503	507	511	516	518	519
Feature no.			27	61	61	66	441	441	441	441	441	441	441	441	459	463	476	472	474	475
Feature type			Pit	Pit	Pit	Pit	Wall trench								Ph	Ph	Ph	Ph	Ph	Ph
Structure			RH 14				RH 5													
Non cereal seeds	<i>Arrhenatherum elatius</i> (L.) P.Beauv.ex J.S. & C.Presl	False oat-grass seed															1			
	Lenticular <i>Carex</i> sp.	Fat Sedge seed																		
	Poaceae culm node	Grass stem node																		
	<i>Pteridium aquilinum</i> (L.) Kuhn	Bracken			1															
	<i>Ranunculus flammula</i> L.	Lesser spearwort	2																	
	<i>Rumex acetosa</i> L.	Common sorrel	1																	
	<i>Trifolium</i> sp.	Small seeded Clover	4																	
	<i>Lamium</i> cf. <i>album</i> L.	White dead nettle	1																	
	<i>Odontites vernus</i> (Bellardi) Dumort.	Red Bartsia	2																	
	<i>Galium palustre</i> L.	Common marsh-bedstraw			1															
	<i>J. conglomeratus/compressus</i>	Soft rush seed capsule	1																	
	<i>E.quingueflora</i> (Hartmann) O.Schwarz	Few-flowered spike rush	1																	
	<i>Cyperaceae</i>	Sedge family	1																	
	<i>Poa</i> sp.	Meadow grass	1																	
	Indet. wild plant seeds		6														1			
	small seed indet.																			
	small legume pod																			
	nutlet indet.																			
	Blob indet.									+										
	parenchyma	Fruit (tuber)	+		(+)	-														
Other residues	Unsorted charcoal		+++	+++	+++	+++														
	Large charcoal (>4mm)								-								+		-	+
	Med. charcoal (2-4mm)							-	+				-	-	-	+	++	-	+	++
	Small charcoal (<2mm)						+	+	+	+	+	+	+	+	+	++	+++	+	++	+++

Table 5.15 (cont.).

Context no.	27	61a-i	61o-v	66	468	470	472	474	476	478	480	482	503	507	511	516	518	519
Feature no.	27	61	61	66	441	441	441	441	441	441	441	441	459	463	476	472	474	475
Feature type	Pit	Pit	Pit	Pit	Wall trench								Ph	Ph	Ph	Ph	Ph	Ph
Structure	RH 14				RH 5													
Other residues	Vitrified charcoal																	
	Carbonized insect remains			++														
	Small mammal bones	+++																
	Bone fragments	+++	+++	++	+++													
	Burnt bone fragments	++	-	+	-													
	Pottery sherds	-			+++													
	Burnt clay		++	+++														
	Flint	-																
	Fly ash																	
	Modern contamination (roots, seeds etc.)	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

in pits F.27 and F.61 within Roundhouse 14 and pit F.66. These could not be identified to species but are a cautionary reminder that cereals were but a component of a wider diet. Other wild taxa represented by seeds, such as holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*) and bracken (*Pteridium aquilinum*), were collected for unknown purposes and may point to nearby woodland or hedges.

Saddle querns

The grinding of foodstuffs with saddle querns and rubbers would have been a daily task in most later prehistoric settlements. Though their use for processing cereals into flour was probably their primary function, it is likely that a range of foods including nuts, seeds, fruits, vegetables and herbs were also ground on these stones. The heavy wear on some saddle querns, including two of the three examples recovered from King's Dyke (see catalogue below), suggests these artefacts were used over long periods. The quern from 'cooking' pit F.94 (Roundhouse 10), for example, was utilized for grinding on both sides: the use of the reverse may have been prompted by the degree of wear (concavity) on the upper surface. Of course, gauging the exact time-frame of use is virtually impossible. But given that most small 'cooking' pots and other daily domestic utensils probably shared fairly short functional life-spans (perhaps no more than four years, based on ethnographic breakage rate averages (see Hill 1995, 129–31)), it seems likely that querns would have been some of the most long-lived pieces of material culture in these contexts.

The longevity or resilience of these artefacts may have lent them an extra level of significance at King's Dyke, beyond that implicit in their practical role. Given arguments about how a tangible legacy of long-term settlement was important to concepts of tenure in the period (see above), it is possible that long-lived objects such as querns were imbued with a specific significance: their wear being another physical measure of the group's immediate history and their connection with a place. This broadly chimes with Brück's (1999a; 2001) discussion of the symbolic and metaphorical relationships potentially drawn between the life-cycles of people, their settlements and the materials such as querns used in these settings. How these concerns were articulated and understood no doubt varied from one context to next. Still, it is notable that querns were often the recipients of formal treatment in deposition (Buckley & Ingle 2001, 326–27). This is undoubtedly the case with two examples from King's Dyke: the quern from F.66 having been placed in the base of the pit alongside two semi-complete pots; and burnt fragments of a second quern being scattered between intercutting features F.495–96 and F.540 in Roundhouse 5 – each associated with a series of lamb bone deposits and/or dumps of pottery.

Saddle quern catalogue (Simon Timberlake with stone identification and sourcing by Kevin Hayward)

Saddle quern 1 (Fig. 5.37, no. 1): F.66 [66], 2754g (total weight), two adjoining fragments: 195mm × 150mm × 50–60mm and 75mm × 80mm × 20–55mm (total length 240mm). Used as a saddle quern

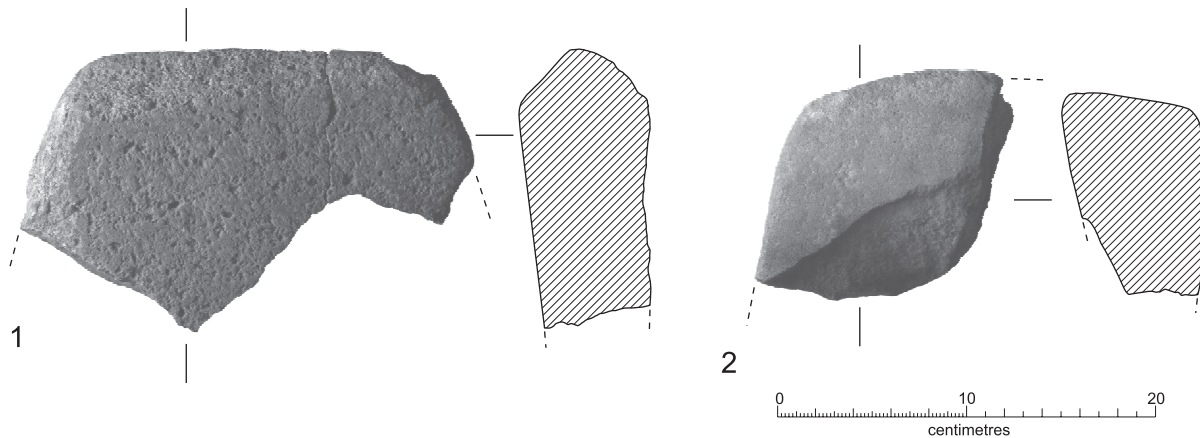


Figure 5.37. Early Iron Age saddle querns from King's Dyke. 1. Saddle quern 1, F.66; 2. Saddle quern 3, F.94.

on its upper surface – this has been ground level, yet the edges are slightly convex, suggesting rubbing with a large flat stone, up to and over the leading edge of the quern. This rim at the upper end of the quern has therefore taken on the most pronounced polish.

Lithological description: Quartz Syenite (Pre-Cambrian or Palaeozoic). A microgranular alkali igneous rock with interlocking mosaic of white and pink feldspar, with occasional quartz, biotite mica and some alteration minerals (hornblende) (J.R.L. Allen pers. obs.). Syenites are characterized by >65% alkali feldspar (Hatch et al. 1972). The closest exposure of igneous rock to Whittlesey is the Mountsorrell Granite and the older rocks from the Charnwood Forest district of Leicestershire (75km). Syenites have been identified in the Pre-Cambrian intrusives of the Charnwood Forest District (Watts 1948).

Saddle quern 2 (not illustrated): Burnt fragments of a small saddle quern recovered from four contexts relating to three associated features. Combined weight of 760g and diameter of at least 100mm:

1. F.495 [540m], 236g, two adjoining fragments: 90mm × 60mm × 30mm (total). Partly decomposed and cracked, perhaps disintegration occurred as a result of intense burning. No worked surfaces.
2. F.495 [540n], 238g, two adjoining fragments: 80mm × 65mm × 50mm (total). No obvious worked surface, though this appears to be the burnt outside edge of the stone.
3. F.496 [541], 190g, a single fragment: 80mm × 60mm × 40mm. Unworked outside face.
4. F.540 [590], 96g, two adjoining fragments: 70mm × 50mm × 25mm (total). Burnt and cracked.

Lithological description: Felsite (Pre-Cambrian or Palaeozoic). Very compact white crystalline coarse grained igneous rock. The predominant mineral is an alkali feldspar with some quartz and white mica (Hatch et al. 1972). The closest exposure of igneous rock to Whittlesey is the Mountsorrell Granite Complex and the older rocks of the Charnwood Forest district of Leicestershire (75km). Felsite has been identified in aplitic veins bordering the main granite mass (Fox-Strangeways 1903).

Saddle quern 3 (Fig. 5.37, no. 2): F.94 [94], 1406g, dimensions: 160mm × 110mm × 50–80mm. Orthoquartzitic sandstone. Burnt fragment of a partly shaped slab of saddle quern. Shows evidence of having been used as a quern on both upper and lower surfaces, each quite heavily used with a central dish or concavity. The use of the

reverse side may well have been prompted by the degree of wear (concavity) of the upper surface. The quern surfaces have taken on a fairly high degree of polish, but no evidence of striation (grinding direction) is visible.

Lithological description: Greensand (Lower Cretaceous). Variable fine light green (glaucous) and micaceous calcareous sandstone. Closest outcrop 40km to southeast at Ely

Other material traditions and technologies

The second material theme covers the evidence for a range of other technological traditions. These encompass flint working, metalworking, boat building and textile production. Although the pottery evidence and worked stone could also have been included in this section, since these have been detailed above, only some passing comments and general observations are made on these materials here.

In general, the evidence for all these material traditions is relatively thin from the site. The metalworking, for instance, is limited to a single piece of bronze slag from F.480 (237g) and the recovery of a ring-headed Early Iron Age pin from F.945 – both waterholes at Bradley Fen. Equally, direct evidence for textile production is confined to a single spindle whorl and seven loomweights. Yet despite the limitations of the material record, it is still possible to sketch out a sense of the character of these activities and this enables some discussion of the social and geographic scales at which these productive technologies and traditions were organized.

Material traditions in context

For the most part, the basics of these traditions were probably structured and reproduced at a fairly local level. Technologies such as flint working, weaving and pottery production were likely to have been organized

within households, or between neighbouring groups. As Billington discusses below, flint working was a relatively infrequent activity from the Late Bronze Age onwards, perhaps occurring in response to specific tasks, or contexts, where metal tools were simply not to hand. Distinct tool-types began to disappear from the lithic repertoire at the beginning of the first millennium BC and the ad hoc character of the material recovered implies that minimal tutelage was now involved in the sourcing, working and utilization of lithic resources.

By contrast, longer material apprenticeships were still required for ceramic production and other 'home crafts'. The persistence of these traditions would have been rooted in the context of learning, with skills and technical competence no doubt inculcated during childhood though a combination of formal tutelage, mimicry and general participation in clay procurement, processing and firing activities (Gosselain 1998, 94). Different levels of accomplishment would have been required from the production of different ceramics. Compared to the pots, for instance, the site's loomweights and spindle whorls were often crudely fashioned, poorly fired and were made with a different set of fabric recipes. The variety and sorting of their inclusions indicate that the clays were not as thoroughly screened or prepared, with the general impression that flint grits, charcoal, chopped vegetable material or other detritus at hand, was employed as a tempering agent.

The protocols surrounding pottery production were more consistent and conventionalized, reflecting their greater significance as social as well as functional utensils. Yet even in pottery production, different levels of proficiency were required to make different vessels in the PDR repertoire. In terms of skill and labour investment, the production of finewares was probably the most demanding: pots distinguished by their fine pastes, thin burnished walls, delicately moulded features and overall symmetry of form. In fact, it is on the basis of these vessels that archaeologists have recognized distinctive decorative traditions, isolating intra-regional groupings, including that of the Fengate-Cromer style (e.g. Cunliffe 1991, 76–77). As reported on above, sherds of this pottery were recovered from two of the roundhouses at King's Dyke, which not only serves to date the structures, but establishes points of connection with other groups of material from the Flag Fen Basin. Whilst there is no evidence to suggest that these finewares were the product of specialist artisans whose work was organized differently in contextual terms, the knowledge and proficiency needed to both mould and fire these intricate vessels may have only been obtained by a

few skilled potters. These accomplished individuals would have no doubt resided in most communities. Their skills, however, may have given them some local renown and, as Brudenell has discussed above, the pots themselves may have been reserved for particular dining events.

Although many of the technical and aesthetic tendencies which structured these practices were resolved at the level of the local, when we broaden our perspective, it becomes clear that they constitute aspects of material traditions which were shared more widely. In the case of pottery, there is no denying that most contemporary vessel forms appear broadly similar from one part of eastern England to the next. Much as we can pinpoint differences in the distribution of certain distinctive pots, such as the Fengate-Cromer style decorated bowls, there is, nonetheless, a 'sameness' to the material repertoire from the region. This implies that there existed a widespread acknowledgment of what was appropriate with regards to material practice: a collective sense that there were right ways of doing things. This not only extended to how pots and other materials were formed and fashioned, but also to how they were used and, in some instances, how they were deposited.

On the one hand, these activities can be understood as attending to the needs, relationships and solidarities that existed within groups at a fairly close scale of social resolution. But on the other, we can see how they were conducted with a repertoire of materials which were made and used in ways that were much more widely understood. At a tacit level, this was an expression of common connections and cultural similarities; practices that would have been recognized and replicated across farmsteads and other contexts throughout the Flag Fen Basin and beyond. Set against these, we can identify material traditional and technologies which were probably more specialized or restricted in terms of who was responsible for them, or where these activities were conducted. In this context, these include metalworking, quernstone production and boat building.

As noted above, the evidence for the former is very slight. However, in light of the location of the slag at Bradley Fen, it is tempting to suggest that bronze metalworking activities were conducted away from the main focus of settlement at King's Dyke. More extraordinary are the details of boat building revealed by Taylor's analysis of the boat section from F.1064 (see below). Given the recent discovery of further intact craft from the Must Farm palaeochannel (Robinson et al. 2015), this report forgoes a broader, comparative discussion of later prehistoric logboats (reserved for a later volume in this series) and instead concentrates

on detailing the production and life history of the Bradley Fen vessel. Crucially, it provides insight into the techniques, tools and personnel involved in fashioning the craft, as well as some important clues as to how and *when* it was dismantled and the state that the boat was in when this occurred. The suggestion is that the craft may not have been made in Flag Fen Basin itself, reminding us that some things in this context came from further afield, either as a result of direct procurement from an external raw material source – in this instance a forest with mature oaks – or participation in various exchange networks. Both are hard to trace, but a sense of the geographic reach of either activity is indicated by the lithology of the quernstones which indicates sources in outcrops as far afield as Ely, Cambridgeshire and the Charnwood Forest district of Leicestershire (see Timberlake and Haywood above).

Waterborne transport was likely the means by which some of these things arrived at sites like King's Dyke and Bradley Fen. As such, the boat gives us a very real point of connection with the local waterways, which are otherwise scarcely registered by the rest of the material residues from the site. Indeed, these crafts probably served to maintain links between communities across the Flag Fen Basin and along the River Nene: contacts ultimately fundamental to the reproduction of many material traditions at broader social and geographic scales.

The boat section and boat building (Maisie Taylor)

The base of the wooden tank in F.1064 was formed from a section of the hull of an oak logboat, cut at the point where the bottom began to rise toward the bow (Fig. 5.38). The width of the surviving section measured 750mm, but could have been as wide 1.5m when originally intact. The underside was virtually flat whilst the profile of the interior was concave, so that the bottom of the boat thickened towards the sides. This curvature, together with the change in thickness, was designed to accommodate the transition from the base to the sides, or '*the turn of the bilge*' (McGrail 1978, 242): the angle suggesting the sides must have been more or less vertical. Although the short ends of the boat section were clearly cut square with a metal blade, the surface where the sides would have started to rise were broken rather than cut. The uneven surface and the angle of the edge, shows that these were snapped off using the natural tendency of oak to split radially.

Boat features

A number of features dating from the original construction of the boat survived. These included two internal ridges, three round holes through the floor of the hull, all containing dowels, and a square hole in the bottom of the boat section. Two further features

on the underside of the hull warrant mention: a tear and a parallel-sided slot.

Integral ridges: Two integral ridges carved across the full width of the floor were present on the boat section's interior – features quite common to logboats of all dates (McGrail 1978, 314–16). There are various theories concerning the purpose and function of the ridges. These include foot-timbers for paddlers, dividers marking out cargo spaces, supports for bottom boards to keep the cargo clear of bilge water and features lending the boat strength (McGrail 1978, 315–16). It is also possible that they were multifunctional or even represent a stylistic tradition in boat building.

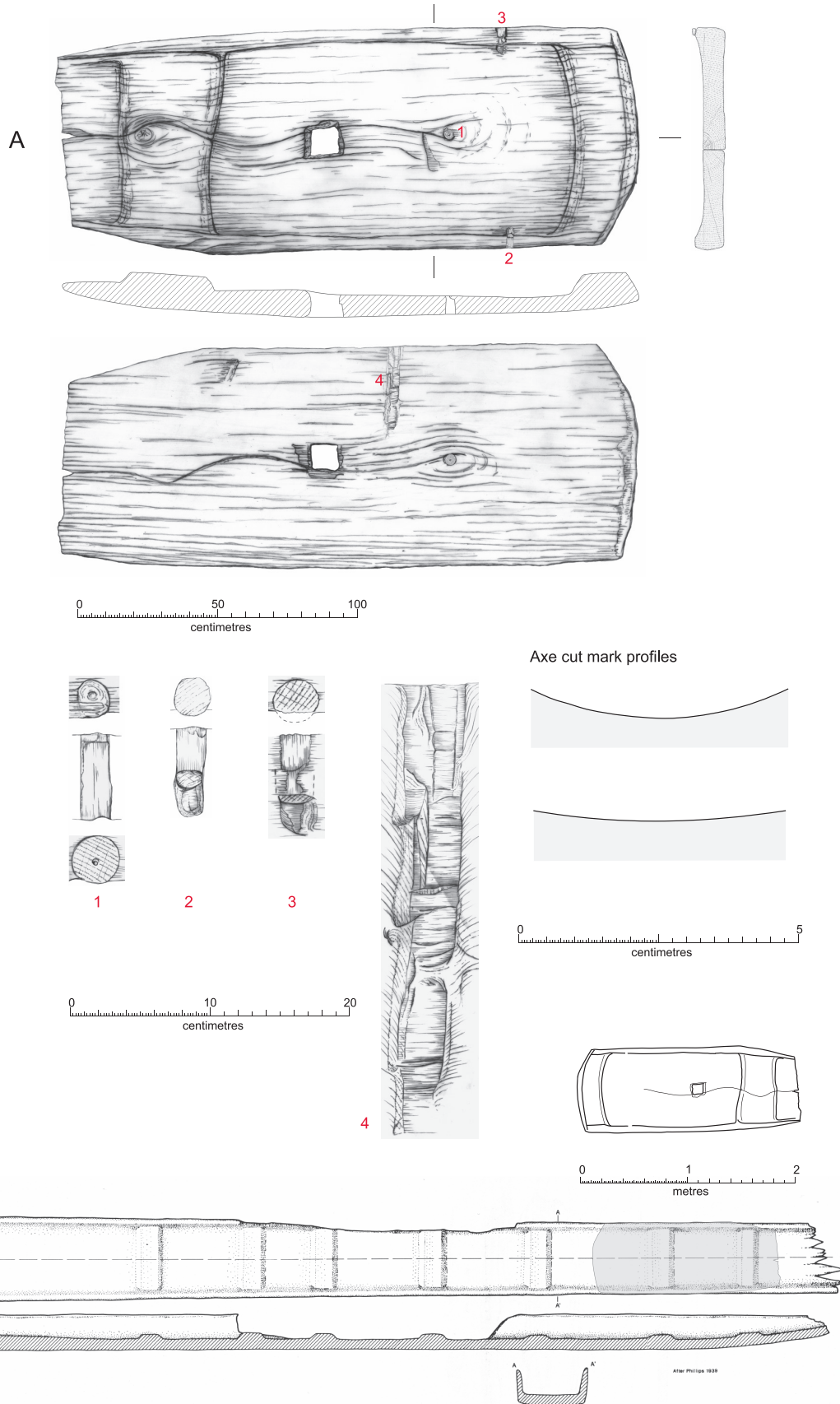
Round holes (depth gauges): One hole was located on the port and one on the starboard side, on the turn of the bilge, with the third located in the base of the hull between the square hole and the second ridge (Fig. 5.38, A1–3). The diameters of the port side hole measured 26mm externally and 25mm internally, whereas the starboard side hole measured 23mm externally and 22mm internally. The slightly larger central hole in the base tapered from 32mm externally to 30mm internally. This hole did not pass cleanly through the hull and there remained a piece of wood, still attached, which overlay the dowel. The dowels in all three holes were very close fitting and also made of oak.

Square hole: A square hole in the bottom of the boat section also dated from the original construction of the boat. It had been cut from both sides, but whilst this has been done cleanly and squarely on the interior, on the underside it was rather ragged, with a certain amount of wood torn around it. The hole was aligned on the grain externally, but was larger and slightly crooked internally. The profile of an axe blade survived in the hole and, though difficult to accurately measure because of its position, it was approximately 40mm wide and 6mm deep (40:6), well within the range of Later Bronze Age axes (Taylor 2001, 200, table 7.28).

Hull tear: This is of the kind left on the surface when wood is split too fast, or when a split runs out of control.

Parallel-sided slot: The slot was carefully cut. It measured around 50mm in width and extended almost halfway across the hull, becoming gradually shallower and petering out after approximately 520mm (Fig. 5.38, A4). The tool marks that survive were not complete, but appear to have been made by a blade up to 75mm in width. This would be very wide for a bronze axe of any type, which perhaps points to the use of an iron blade. Unfortunately there is no convenient corpus of width and curvature of iron axes for comparison. That being said, three typical Iron Age axes from Fiskerton, when measured from the drawings, produced broadly comparable dimensions, with width:depth ratios of 69:8, 78:12 and 75:9 (Fell 2003, 68, fig. 4.14). If, then, the marks were made with an iron axe, it would suggest that the slot may not relate to the original construction of the boat, but its subsequently cutting up.

Figure 5.38 (*opposite*). Details of the boat section from F.1064, showing axe cut mark profiles. A. Plan and section of the boat: A1–3. Round holes (depth gauges) and dowels; A4. Parallel-sided slot. B. Section relative to the hull of the Clifton 1 Bronze Age boat (after McGrail 1978, fig.12).



The construction of the boat – timber selection, fashioning techniques and the role of the Master Builder

The tree used for the construction of the Bradley Fen craft had a straight grain with an estimated trunk diameter of more than a metre. As with most other British logboats, oak was the chosen species, this being durable and resistant to fungal decay. It furthermore benefited from being relatively easy to work when green (i.e. freshly felled, unseasoned) and strong enough to withstand damage. However, given that oak heartwood is not known for its lightness, portability was evidently surrendered in order to gain from these other inherent properties of the timber. This may seem like a small sacrifice, but it probably meant that the tree was felled away from easy access to a watercourse, increasing the labour input required for transporting, manoeuvring and launching the craft. Indeed, as the boat required a large straight-grained trunk, with a length of around 10m (based on the dimensions of boats of similar design (Table 5.16)), it can be reasoned that the oak used was growing in a forest, or at least in dense woodland (Rackham 1976).

Bog oaks from the Fens show that trees of this size and quality were dying and collapsing into the peat as the Flag Fen Basin grew wetter throughout later prehistory. The quality of oak from waterlogged excavations certainly decreases through time and the big trees must have gradually become rarer (Taylor 2010). As oak regenerates from its roots when cut down, there could still have been plenty of oak trees growing on the dryland fringes of the Basin. But these would not necessarily have been large and, given the picture of environment emerging from the pollen record, are unlikely to have grown in pockets of woodland dense enough to produce the kind of timbers required for boat building. In short, it is possible that the tree used in the construction of the boat was felled outside of this immediate landscape.

These points aside, the large knot in the bottom of the boat shows that the tree selected was less than perfect. It is apparent that, even by the Bronze Age, it was not always possible to find the trees ideally suited for boat construction, even beyond the Flag Fen Basin. In this instance, the presence of a knot would have presented problems for the builders. For one, it would have made it harder to keep the split straight

when the trunk was being ‘roughed-out’ in the early stages of building (although the straightness of the grain is the more important factor). Other problems can arise later on, because the wood in knots is prone to rot. Although quite large, the knot on the Bradley Fen craft was still fairly solid and showed no sign of rotting and therefore did not require the sort of bung repair seen on some other logboats of a similar date (e.g. Pierrepont 2 (McGrail 1978, 208)) and Fiskerton (Taylor in prep.).

The tear previously mentioned on the underside of the boat is evidence that the craft was roughed-out using tangential splits, such as those used in the first stage of ‘boxing’ the heartwood (Taylor 2010, 90–91). In fact, it is likely that the tree was initially reduced to a square section in this way so as to remove sapwood and other unwanted timber, thus reducing the amount of hewing needed to achieve the correct exterior profile. McGrail was of the opinion that a number of techniques could be used for shaping a hull: charring and scraping or adzing, but where tools alone were used, grooves were axed out and wood split out between them (McGrail 1978, 32; see also Edlin 1973, 12; Pedersen et al. 1997, 287).

The labour required to fashion the craft was probably met by a team of builders, perhaps under the direction of a single *Master Builder*. Some insight on how this labour was organized and executed is obtained from the analysis of tool marks on one of the boats excavated at Fiskerton, Lincolnshire in 2001 (Taylor in prep.). As metal tools would have been ubiquitous in later prehistory, it cannot always be assumed that different axe marks on wood represent different workers in every context (unlike in the Early Bronze Age (see Brennand & Taylor 2003, 29)). However, in instances where similar axes were being used for similar tasks in the fashioning of the hull of logboat, it does seem reasonable to suggest that they represent different members of the construction team. On the Fiskerton boat, tool marks were recorded on 16 different parts of the craft and were likely made by 10 different axes, potentially equating to a team of 10 builders. Interestingly, only one axe was used in two different places, suggesting individuals fashioned separate areas of the boats. The most complete set of tool marks was in the interior, occurring in discrete areas, suggesting that

Table 5.16. *Comparative logboat dimensions (McGrail 1978, 178–83, 252–53).*

Boat	Whole logboat	Diameter	Thickness of bottom	Length	Width
Bradley Fen	+	1000–1500mm	95mm	?	750mm
Clifton 1	+	900–1040mm	100mm	8.5m	760mm
Clifton 2	+	980–1040mm	100mm	9.25m	760mm
Peterborough	+	1000mm+	90–95mm	9.91m	760mm

groups of workers did not move along hull, but were responsible for their own sections within it.

This way of working would have required careful coordination from a skilled craftsman – the Master Builder – particularly when marrying-up the various sections. The only way that this could be achieved was by setting various guides and gauges to indicate the thickness to be hewn by the different workers. Evidence of these gauges survived on the Bradley Fen boat section: the three cylindrical holes cut through the hull, each slightly tapering towards the interior and plugged with dowels. These holes served as depth gauges which would have been cut to a depth equal to the required thickness of the hull. With these in place, the boat builders would know to stop hewing the hull once the bottom of the holes had been reached. The thin flap of wood overlying the central dowel bears this out, showing that the exterior of the boat was shaped first, the hole cut, and then the interior hewn until the hole was partially exposed. Once the gauges were no longer needed, small dowel rods, which would swell once wet, were inserted. These were further held in place by the pressure of the water from outside of the boat.

The purpose of the square cut hole in the centre of the base is more difficult to judge, though broadly similar features have been noted by McGrail (1978) on the Clifton 1 and Clifton 2 logboats (Phillips 1941), on three boats from Pierrepont (although the holes here are smaller) and on one example from Peterborough. Although McGrail (1978, 85) suggests that these features could have served as thickness gauges or as settings for a mast, he is sceptical of either interpretation. One plausible alternative is that they played a role in drainage. To stop the wood shrinking and splitting through drying out, logboats needed be left both lying in, and full of, water when not in use. When needed, the easiest way to remove the excess internal water would be to drain it through a reasonably sized hole. The only major problem would be making these larger holes water-tight again. This was less of an issue with the round tapered thickness gauge holes, which were which permanently plugged by dowels. The square holes, however, were not tapered, but many appear to be quite worn, including the Bradley Fen example. This would imply that any bung or stopper used on the hole was probably removed and replaced a number of times during the life history of the craft.

The dismantling of the boat

Oak splits easily along certain planes, which is one of a number of reasons why it has been so widely used for timber, both now and in the past. The wood splits most readily along the medullary rays, i.e. radially, and this tendency was exploited in the Bradley Fen

boat, where the sides were broken-off cleanly along the line of the medullary rays. There is no sign that the broken edges were trimmed up with an axe. When fresh oak is split, the two halves are held together by linking strands of torn fibres which have to be chopped through before they can be separated. The surfaces here, however, seem to have broken with no rough fibres and no indication that an axe was used to clean them up. This kind of break only occurs when oak is totally waterlogged and degraded. It indicates that the boat was dismantled some time after it had gone out of use: time enough for the boat to become waterlogged and begin to lose its woody structure.

However, there are traces on the *ends* of the boat section to indicate that it was cut square with a sharp tool, which left clean, flat facets, characteristic of an iron axe. The only bronze tools which leave similar marks are early flat or flanged axes, but they would not have been capable of cutting seasoned oak heartwood even if waterlogged. Experiments using bronze tools indicate that although green oak can easily be worked with bronze blades, the cutting edge is not hard enough to be effective once the oak has begun to season (Francis Pryor pers. comm.). The use of iron axes is further evidenced by the size of the tool marks on the parallel-sided slot on the underside of the boat, which presumably represents a failed attempt to cut the craft in two at this point.

In combination, there is clear evidence that the boat sides were snapped off after the wood became waterlogged and that iron axes were employed to cut up the hull suggesting that the section found in F.1064 could not have been cut from the boat until long after it had been abandoned. The craft seems to have been fashioned and used in the later Bronze Age, but its destruction and incorporation into the tank in F.1064 evidently occurred during the earlier Iron Age.

Flint working (Lawrence Billington)

The middle centuries of the second millennium BC mark a significant fault line in the character of production and use of flint tools across southern Britain. Traditionally these changes have been associated with the functional replacement of flint with metal tools and with a decline in the social importance of lithic technologies, manifested in the use of poor quality material, an extremely expedient approach to core reduction and the disappearance of many formal tool types, as well as a marked reduction in the size of assemblages (see Ford et al. 1984; Herne 1991; Edmonds 1995; Young and Humphrey 1999).

These characteristics make the identification of later prehistoric flintwork particularly difficult in a multi-period assemblage such as this, where a small

Table 5.17. *Later prehistoric worked flint from Late Bronze Age to Middle Iron Age features at Bradley Fen and King's Dyke.*

Site	Bradley Fen											King's Dyke			
Feature	433	480	691	759	763	766	768	778	784	1013	1018	361	441	89	525
Date	LBA	EIA	LBA	MIA	MIA	MIA	MIA	EIA	MIA	MIA	MIA	EIA	EIA	EIA	EIA
Chunk	1	-	-	1	-	-	-	1	2	-	1	1	-	-	-
Flake	-	1	1	-	-	1	-	-	1	-	-	-	-	-	1
Core	-	-	-	-	1	1	1	2	-	-	1	-	-	-	-
Scraper	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Retouched flake	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
Total	1	1	1	1	1	2	1	3	3	1	2	1	1	1	1

component of later material can effectively vanish, masked by the ubiquitous background presence of earlier flintwork. This is certainly true of the Bradley Fen and King's Dyke assemblages and is thrown into sharper relief by the presence of a large Early Bronze Age component to the lithic assemblage, much of which exhibits technological traits indistinguishable from later (Middle Bronze Age to Iron Age) pieces.

The Early Bronze Age is the last period associated with relatively large assemblages of worked flint on the sites. Very few flints are associated with the fieldsystem or with features associated with Deverel Rimbury pottery, although it is unclear whether this reflects the way flint was deposited or a dramatic reduction in the manufacture and use of flint tools. This pattern extends into the Late Bronze Age and Iron Age where, despite an abundance of settlement features including structures, the use of flint appears to have been extremely restricted.

A total of 163 worked flints were recovered from 85 features dated to the Late Bronze Age to the Middle Iron Age. It is immediately apparent that the vast majority of this material is residual. Diagnostic types of Mesolithic, Neolithic and Early Bronze Age date are well represented and the technological traits of the debitage are indicative of either structured blade based Mesolithic/earlier Neolithic technologies or flake based industries of later Neolithic/early Bronze Age date. Amongst the mass of earlier material, a number of pieces can tentatively be suggested to be broadly contemporary with the features from which they were recovered, listed in Table 5.17. Retouched forms include a piercer from F.89 and a reused patinated flake with crude abrupt retouch from the wall-trench of Roundhouse 5 F.441. A proportion of the flake-based debitage from the assemblage exhibits traits consistent with a later prehistoric date; made of poor quality gravel flint and exhibiting a lack of control of core reduction evidenced by awkward flaking angles, platform crushing and misplaced hammer blows. This material is not strictly diagnostic and most of it could well represent

the less refined component of later Neolithic and, especially, Early Bronze Age technologies. Small groups of such material, including flakes, shattered chunks and cores were recovered from Early Iron Age pit F.778 and Middle Iron Age pit F.784. Material with similar characteristics was also recovered from several Roman features; notably F.550 and F.551 which contained chunks, flakes and cores reflecting the expedient use of small poor quality gravel nodules.

The small and undistinguished assemblage of flint relating to later prehistoric activity on the sites appears to have little to contribute to our understanding of the character of settlement activities or depositional practices. It seems that the use of flint was only ever on a small scale and was perhaps a relatively infrequent occurrence in response to specific tasks and activities. It is interesting to consider the social conditions under which this limited and expedient working and use of flint took place. Recent studies have begun to place increased emphasis on the way in which flint working was taught and learnt in prehistoric societies (see Bamforth & Finlay 2008). To date most of these have been concerned with complex and sophisticated working techniques such as specialized blade production (e.g. Fischer 1989; Pigeot 1990) or exceptional classes of artefact such as flint daggers or axes (e.g. Apel 2001; Högberg 1999). This work has invariably suggested the operation of relatively formal 'apprenticeships', with skilled practitioners directly overseeing the training of others. Little work has been done on informal, expedient technologies and it seems unlikely that these models are relevant to the material considered here. We can perhaps envisage a much less formal transmission of knowledge, with tacit imitation and minimal tutelage characterizing the way in which people learnt to collect, work and use lithic resources. Edmonds (1995, 188) has noted that by the later Bronze Age '*the learning of complex knapping techniques may itself have ceased to be an important feature in the lives of many people*'. As a technology that was rarely explicitly articulated or considered, later prehistoric flintwork

perhaps became increasingly peripheral to wider social discourse.

If the social importance of flint-use was marginalized during later prehistory, it is appropriate to consider if this attitude extended to the earlier lithic material that must have routinely been encountered by the inhabitants of the later Bronze Age and Iron Age landscape. The large numbers of residual flints implies that such pieces must have been a familiar presence whenever activities such as digging features or cultivation took place. Although for the most part these pieces may have been passed over without consideration, their presence must surely have, in some way, contributed to the inhabitants' understanding of antecedents and history.

Textile production (Matt Brudenell)

The only evidence for textile production derived from the small fired clay assemblage, in the form of loomweights and a single spindle whorl. Out of the 144 pieces of fired clay (4548g) recovered from Late Bronze Age and Early Iron Age features, 105 (4176g) were identified as pieces of loomweights, or other sub-rectangular fired clay blocks of loomweight-like form (Table 5.18). In total, this amounted to fragments of a maximum of seven weights, derived from four different features (see catalogue below). Six were made in sandy clays of Fabric 1, although individually, the recipes for each weight were subtly different, particularly with regard to whether or not pieces of flint, gravel, or burnt-out vegetable matter were caught in the clay matrix. The impression is that clays were not carefully prepared and that any temper employed was added in an ad hoc manner.

The seventh weight was in a sand and shelly fabric (Fabric 8), shared by some of the pottery vessels. In fact, this unusual and slightly irregular ovoid weight may have been formed from left over potting clay. This is certainly plausible, given the pragmatism and

The Bradley Fen/King's Dyke later prehistoric fired clay fabric series

1. Moderately hard, slightly sandy fabric, orangey-brown to buff in colour, often with a hackly or laminated fracture. Fabrics can contain rare flint, gravel grits and voids from burnt-out vegetable matter.
2. Hard, compact, relatively abrasive sand fabric, orangey-brown in colour.
3. Soft, powdery sand fabric, pale orangey-yellow in colour.
4. Fine sandy fabric with sparse mica flecks, pinky-orange in colour.
6. Hard sandy fabric with sparse to moderate coarse flint, some with rounded quartz grains and sparse mica.
8. Slight sandy fabric with rare to moderate, fine to coarse voids, probably from leached shell.
9. Soft, sometimes powdery fabric with occasional voids/shell flecking and rare to sparse coarse unburnt flint.

expediency displayed in loomweight manufacture. The ovoid weight, for instance, had a failed perforated hole on one side. The stick or other such instrument pushed through the clay had clearly hit a stone or some other obstacle. No attempt, however, was made to remove this inclusion or smooth over the perforation; instead a new hole was simply fashioned. Similarly, the rectangular clay 'brick' from pit F.495, which may have been a loomweight (given its similarity to the more complete example from F.280, Fig. 5.14), had irregular stab/slash marks on the exterior, suggesting it was used as a cutting surface prior to being fired.

Comment must also be made on the rectangular 'style' of loomweights at Bradley Fen and King's Dyke. Certainly, from the Early Iron Age onwards, the commonest form of loomweight in Britain is the triangular type, found widely throughout eastern England. These rectangular versions are therefore quite unusual (especially in Early Iron Age contexts), but can perhaps be considered a variation of the pyramidal forms with a tapering square profile, best paralleled at a regional scale by the Late Bronze Age/Earliest Iron Age assemblages from Mucking North Ring (Bond 1988, 37–39, fig. 26). As Champion notes (2011, 219), these are a common type in Iron Age Europe, with finds demonstrating their function in warp-weighted looms.

Table 5.18. *Fired clay quantification by fabric. The 39 sherds not belonging to loomweights or spindle whorls were undiagnostic, but are thought to represent pieces of daub and/or over lining.*

Fabric	No. fragments	Weight (g)	% by weight
1	117	3530	77.6
2	10	144	3.2
3	5	31	0.7
4	2	10	0.2
6	4	102	2.2
8	3	723	15.9
9	3	8	0.2
Total	-	-	100

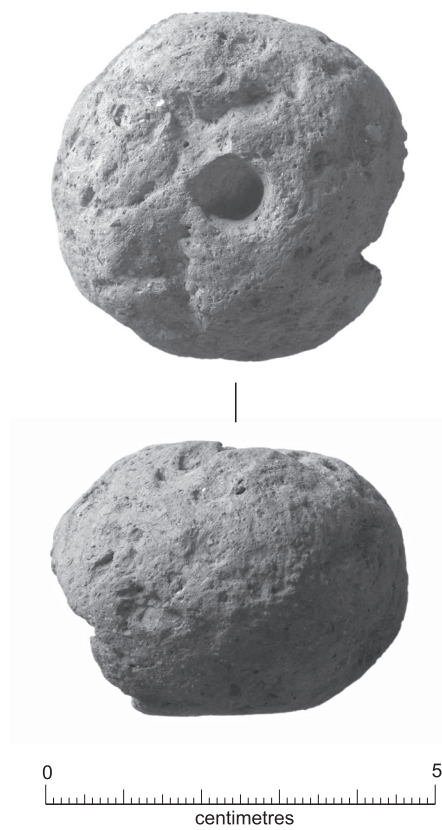


Figure 5.39. *Spindle whorl from F.433, Roundhouse 4.*

Whilst the loomweight attest to onsite weaving, the only evidence for spinning was a single spindle whorl recovered from Roundhouse 4 (Fig. 5.39).

Discussion

For the last decade or more, there has been a tendency in studies of later prehistoric settlement to emphasize continuity between the Late Bronze Age and Early Iron Age, or deal with these remains as a single undifferentiated entity. On first inspection this seems justified, as the archaeological imprint of settlement is broadly similar in both periods, especially in eastern England where most sites dating to the late second and earlier first millennium BC are characterized by unenclosed swathes of pits, postholes and structural remains. This is certainly the case at Bradley Fen/King's Dyke, where there are even similarities in the distributional patterning of features, with structural remains occupying the dry slopes above the 2m OD contour and wells and waterholes on the damp-ground terraces below (Fig. 5.40). There are also points of continuity here and elsewhere in material technologies (see above), particularly the pottery,

Loomweight and spindle whorl catalogue

1. Fabric 1, rectangular with hole perforated off centre (17mm in diameter). Late Bronze Age. F.280 [208], intact, 1242g, dimensions: 168mm × 99mm × 60mm (Fig. 5.14, top)
2. Fabric 1, part of a rectangular loomweight or 'clay block' with stab marks on the surface. Early Iron Age. F.495 [454Q], seven fragments, 812g, surviving dimensions: 156mm × 103mm × 87mm (not illustrated).
3. Fabric 1, pieces of fired clay with flat surfaces, probably from a rectangular loomweight or 'clay block'. Early Iron Age. F.495 [454Q], 32 fragments, 172g (not illustrated).
4. Fabric 1, part of a rectangular loomweight or 'clay block'. Early Iron Age. F.315 [338], one fragment, 320g (not illustrated).
5. Fabric 1, part of a rectangular loomweight or 'clay block'. Late Bronze Age? F.84 [84], four fragments, 141g, surviving dimensions: 94mm × 84mm × 9mm (not illustrated).
6. Fabric 1, fragments of fired clay with flat surfaces and rounded corners, probably from a rectangular loomweight or 'clay block'. Late Bronze Age? F.84 [84], 59 fragments, 718g (not illustrated).
7. Fabric 8, irregular ovoid loomweight with two perforated holes (one partial) at right angles to one another (both 17mm in diameter). Late Bronze Age. F.280 [208], intact, 671g, dimensions 116mm × 87 × 69mm (Fig. 5.14, bottom).
8. Fabric 8, spindle whorl (hole diameter, 9mm). Late Bronze Age. F.433 [394], intact, 47g, dimensions: diameter, 44mm; height, 32mm (Fig. 5.39).

with both Late Bronze Age and Early Iron Age wares allied to the broader PDR ceramic tradition (Barrett 1980). Yet beneath these surface similarities, which often appear to dictate the decision to conflate the remains of these periods, there are some fundamental differences in the nature of social and material traditions on either side of the Bronze Age–Iron Age transition. Somewhat strangely, these have tended to get lost or downplayed in settlement studies, even though it has long been recognized that contemporary changes in metalwork, metalworking and metal deposition signpost profound transformations in society at this point.

Whereas these contradictions seem to have passed largely unnoticed for a number of years (or were at least glossed over because of difficulties in reconciling the two contrasting perspectives), more recently efforts have been made to reassert what the broader differences are between these periods (Needham 2007). Following suit, this chapter has

attempted to tease apart the different components of the Late Bronze Age and Early Iron Age settlement at Bradley Fen/King's Dyke, with the aim of discussing how these fit within markedly different patterns of occupation in the wider (social) landscape of the Flag Fen Basin. Maintaining a distinction between the two periods – where possible – has been made all the more

Spatial-temporal configuration 3 – settlement pattern (distributed and convergent)

The Late Bronze Age and Early Iron Age settlement features occupied different contours as well as different contexts. The architecture of the former was constructed in relation to enduring elements of the Middle Bronze Age fieldsystem, whereas the latter had its own emphasis detached from the earlier grid. Moreover, the intensity of occupation changed: Late Bronze Age being

seemingly single-phased and distributed; Early Iron Age being multi-phased and focussed. The in-field situation of Late Bronze Age settlement was in many ways equivalent to the context of the metalwork, in that both referenced the continued dominion of land divisions (even if on different sides of the encroaching wet-dry divide). Early Iron Age settlement was removed from the increasing saturation. This dynamic changed in the Middle Iron Age when settlement and its architecture converged emphatically at the fen edge.

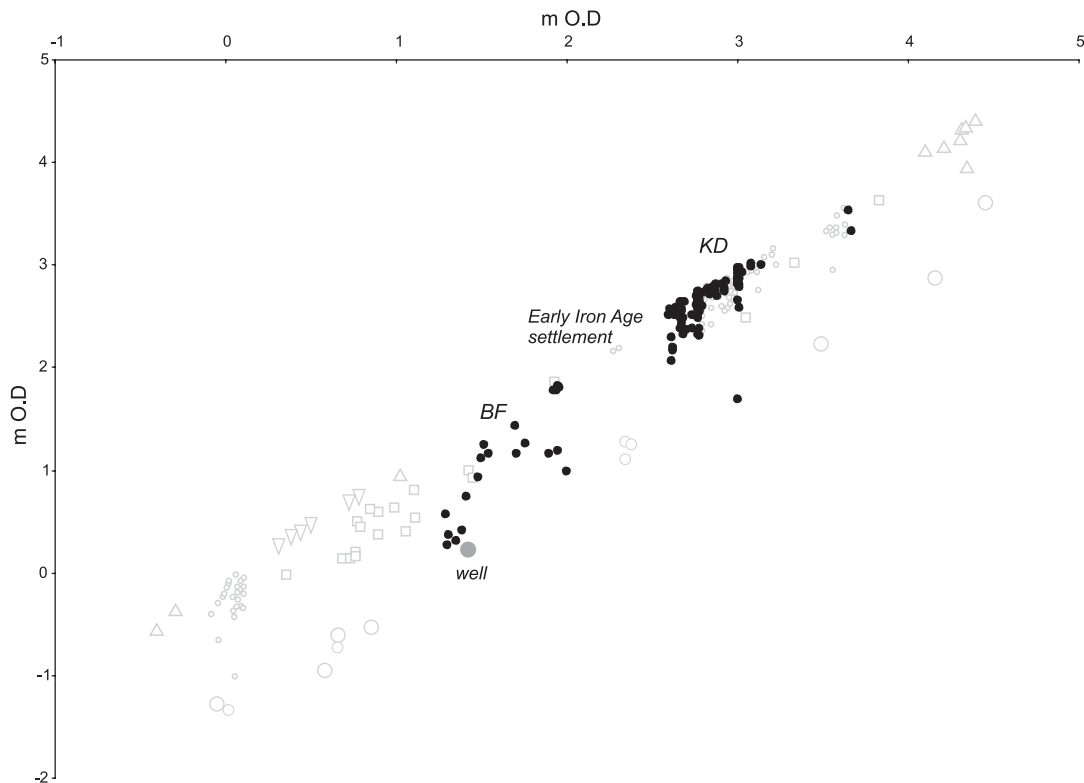


Figure 5.40. *Spatial-Temporal Configuration 3 – Settlement pattern (distributed and convergent).* BF = Bradley Fen; KD = King's Dyke.

important in this context, as it was first believed that *all* the settlement remains at King's Dyke were of later Bronze Age origin (Knight 1999; Gibson & Knight 2002). Indeed, this initial interpretation has since found its way into print in several summaries and broader discussions of the period (e.g. Yates 2007, 91; Evans 2009b, 40). As such, there has been something of a need to 'set the record straight' on phasing and clearly outline what is Late Bronze Age and what is Early Iron Age in this setting.

This is quite an unusual situation, but partly stems from the fact that understandings of dating in this period have shifted considerably since the excavation of King's Dyke in the late 1990s. Crucially, the development of a fresh chronological framework for the British Late Bronze Age (Needham et al. 1997) has provided a new perspective on the currency of, and temporal relationship between, different material traditions (Needham 2007). Perhaps most importantly, at least in terms of phasing sites like King's Dyke and Bradley Fen, it has offered some clarity on the periodization of Plain and Decorated ware PDR pottery, strengthening confidence in the efficacy of ceramics in dating contexts to *either* the Late Bronze Age (c. 1100–800 BC) *or* the Early Iron Age (c. 800–350 BC). This was previously a grey area in dating, especially in Cambridgeshire, and one which was arguably responsible for much of the soft-handed phasing of settlements in the last decade or more. It certainly encouraged the liberal use of broad chronological terms such as Late Bronze Age–Early Iron Age for sites: phasing brackets which have in turn helped to foster the impression of long-term continuity in the character and patterning of settlements across the transition.

The effects of the changes to these chronological schemes have been slow to filter through in ceramic studies, but are now having an impact. As well as rephasing the settlement remains at Bradley Fen and King's Dyke, they have previously led to the redating of deposits at Tower Works, Fengate (Lucas 1997; Evans & Pryor 2001; Brudenell et al. 2009) and, more recently, to the recognition of further evidence of Early Iron Age occupation at Tanholt Farm (Patten 2009). This has prompted concern that other settlement deposits in the Flag Fen Basin once dated on ceramic grounds to the Late Bronze Age will need to be reviewed. The rephasing has resulted in a switch in the balance of our evidence from either side of the Bronze Age–Iron Age transition, which is starting to shape a very different picture of occupation histories. This discussion reflects on these newly emerging patterns and aims to show how the deposits from Bradley Fen/King's Dyke both add to, and help understand, the broader nature of settlement in the Flag Fen Basin.

The Late Bronze Age

With no more than two isolated roundhouses (Roundhouse 4 and, possibly, Roundhouse 12), the odd granary structure (Four-post Structures 1 and 2) and a handful of pits and waterholes, the Late Bronze Age settlement remains at the site can hardly be described as anything but highly dispersed. The lightness of this footprint was matched by the paucity of the material culture yielded, with fewer than 200 sherds recovered, along with two loomweights, a single spindle whorl and a very small assemblage of animal bone. Given the kinds of artefact frequencies and feature densities now known from published Late Bronze Age sites in Cambridgeshire, including others located along the Lower Ouse and Cam Valleys (e.g. The Hutchinson Site, Addenbrooke's (Evans et al. 2008), Striplands Farm, Longstanton (Evans & Patten 2011) and Over (Evans 2013)), it scarcely seems appropriate to label this a settlement. The problem, however, is deciding what these diffuse feature-scatters represent in social terms.

On the one hand, it could be argued that the imprint is broadly similar to that of the Middle Bronze Age, inviting an interpretation which emphasizes continuity in settlement pattern. This has its attractions, not least because the features seem to be nested within, and aligned in respect to, the grain of the fieldsystem. There are also striking similarities in the nature of the animal-bone-rich waterholes, particular between F.528 and F.34, F.391, F.544 and F.991. On the other hand, there is also an important distinction to be made, in that no obvious structures have been identified for the Middle Bronze Age phase at Bradley Fen. In fact, roundhouses of this date have proved remarkably elusive throughout the region and only come back into focus again during the Late Bronze Age, at precisely the same time that ditch-bound fieldsystems start to slip from view. This is an important but much glossed-over trend in the wider landscape sequence. The direct comparison between the Middle and Late Bronze Age settlement signature may not therefore get us very far. As such, perhaps the simplest explanation (and the one presented above) is that the Late Bronze Age feature-scatter reflects patterns of short-term residency or seasonal activities on the terraces: activities conducted away from the main hubs of settlement.

This interpretation arguably fits best with the evidence at hand and would go some way to explaining why the settlement imprint differs to that normally associated with this period in other parts of the region. That being said, it does beg the question of where these hypothesized settlement hubs were in the Flag Fen Basin at this time. Given the scale of excavation along the terraces at Fengate, and further north around Eye and Thorney, it is surprising that no actual 'hub' has been

identified. Instead the remains that have been revealed are remarkably similar to those at Bradley Fen: isolated and predominately finds-free roundhouses, dispersed pits and the occasional waterhole, with very few substantial or closely datable artefact assemblages (Fig. 5.41). Extensive feature-scatters of 'post-fieldsystem' or *later* Bronze Age attribution have been identified at sites such as Edgerley Drain Road and the Elliott Site (Evans et al. 2009), but in truth, few of these are phased with any degree of certainty because of the paucity of finds or stratigraphic associations. (In this instance, fewer than 130 sherds of PDR pottery were recovered in total from both sites). Yet, the default approach is still to *assume* that these belong to this period (as opposed to the Middle Bronze Age or even the Early Iron Age).

There is, of course, one context where Late Bronze Age remains have been found in abundance in the Flag Fen Basin – the wetland itself. Although the interior of the basin has received only limited investigation, excavations at Must Farm and those along the path of the Flag Fen post-alignment have revealed more substantive traces of Late Bronze Age occupation, which could be considered evidence of sustained settlement. The most spectacular example of this is the material associated with the Must Farm platform, with a range of intact pots, items of metalwork, textiles and glass beads (Knight 2009a; Gibson et al. 2010). These objects stand out, but it is important to stress that there were also other more mundane or common-place artefacts amongst them: charred cereals, pieces of butchered animal bone, small isolated fragments of pottery and other detritus more familiar to contemporary dryland sites. It is not inconceivable that this was a permanently-occupied pile-built settlement, as opposed to some specialized trading platform or fishing station.

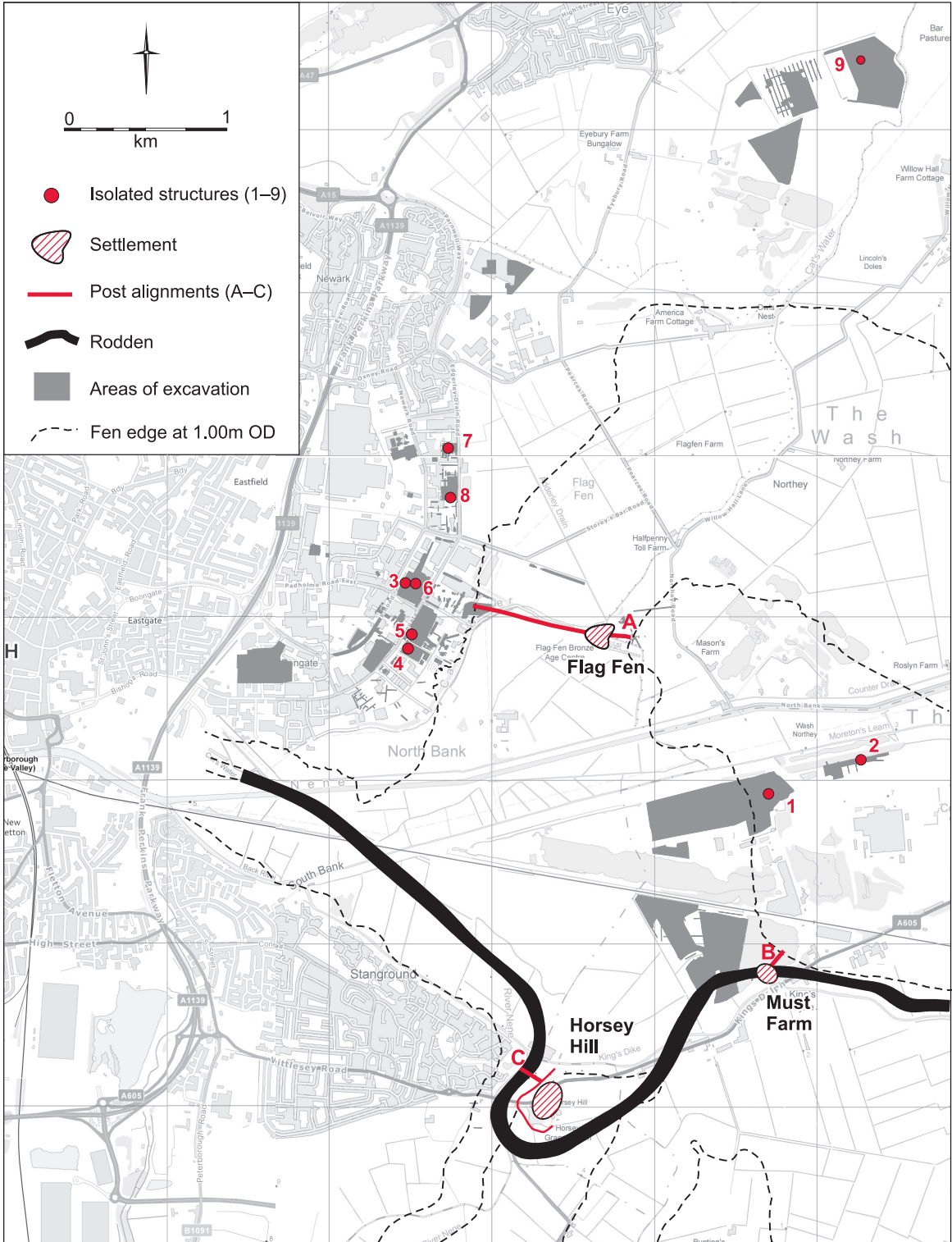
The same could be argued for the Flag Fen platform, given some of the artefact evidence the site produced (particularly the pottery). Pryor has long since abandoned his interpretation of the site as a lake village, in favour of a unique ritual centre where a range of rites associated with the dead and the deposition of objects was conducted (Pryor 2001, 426–29). This is a compelling argument, but it requires us to see ritual as a distinct sphere of activity divorced both conceptually and spatially from other kinds of contemporary practice. This runs counter to most recent thinking on the nature of ritual behaviour in later prehistoric societies, which stresses how ritual was interwoven within daily routines, drawing on and reproducing the same generative principles and categories of material culture as other social practices (Hill 1995, 99). In other words, just because we see symbolic intent in the way artefacts were deposited off the Flag Fen platform, this does not necessarily

mean that those actions were conducted outside of a settlement-related context. Put succinctly, arguments do not need to be polarized around the issue of whether the platform was a settlement *or* ritual centre. Indeed, there is time enough in the platform sequence for the structure to have served a number of potential roles, sustained settlement being one of those.

What we can be more certain of now is that this was *not* the only timber edifice standing in the Flag Fen Basin in the Later Bronze Age (Fig. 5.41). Rather, given the recent discoveries at Must Farm and Horsey Hill (Gibson & Knight 2009; Gibson et al. 2010), today it seems more likely that raised causeways and settlements were regular fixtures of this saturated landscape (particularly along the roddons). Strictly speaking, Flag Fen may still be the largest and most extraordinary example of one of these structures, but as with the Must Farm platform, it is unlikely to be an unparalleled *site-type*. The problem is we simply have not been afforded the same opportunities to prospect for similar sites in this setting.

Peat cover and depth obviously militate against orthodox forms of survey in the basin interior. However, so too have our assumptions that settlement *must* have been displaced from this environment by the rising water-table in the later Bronze Age. Simplified, the conventional (but often implicit) model has it that settlement gradually contracted upslope as the peat grew in that period (e.g. Evans 2002, 36). But this is not supported by the evidence on the dry ground. Structures and light feature-scatters undoubtedly come into sharper focus in the Late Bronze Age, but as discussed above, these do not equate to settlement cores or hubs of any real sustained activity. In fact, the opposite could well be true. Contrary to received wisdom (e.g. Evans 1997a, 224–25), settlement purposely *colonized* the wetland in this period, rather than retracting from it. What we observe on the dryland terraces like Bradley Fen are in fact traces of 'off-site' activities: structures perhaps seasonally occupied by sub-sets of the community herding livestock and/or tending crops. The main centres of occupation, by contrast, were in the wetland interior, explaining why they have evaded our now extensive investigations along the basin shoreline.

The implication is that later Bronze Age communities responded much more favourably to the changing conditions in the Flag Fen Basin than we have previously given credit. Some fields, plots of summer pasture and/or winter flood-free meadows, were certainly lost to water at this time and this was no doubt a cause of inter-community tension. Yet simultaneously, a different kind of landscape emerged, which offered other opportunities for these groups.



As such, the wet was to become as much a draw for settlement as it was an obstacle. Given how limited our investigation of these settings has been to date, everything so far discovered in this context points to changes in the environment being met by *increased* levels of investment in water-fast timber architectures, as opposed to any real sense of retreat. This speaks of a desire to be in this waterscape during the Late Bronze Age and, perhaps more importantly, to maintain links with the channels of the River Nene, which still pushed their way around the fen basin. The excavation of the Must Farm palaeochannel certainly shows the extent to which these watercourses were exploited at this time, with the adjacent roddon serving as a causeway into the waterscape.

The Early Iron Age

Changes to the chronology of the later Bronze Age and the recent realignment of the PDR pottery sequence to this new scheme, have had a major impact on the identification of Early Iron Age sites in recent years. This is especially so in the Flag Fen Basin, where a number of sites once thought to be Late Bronze Age in origin, including the settlement at King's Dyke, have now been reassigned to the Early Iron Age and confirmed to be of this date by radiocarbon determinations (Table 1.1). The picture of Early Iron Age occupation in this setting has therefore changed dramatically and the evidence from King's Dyke proves particularly significant, providing the first comprehensive view of a settlement 'core' featuring no fewer than nine roundhouses (10 if Roundhouse 12 is included), four four-post structures and a wide scatter of other pits and postholes.

Earlier discussion of the building sequence served to demonstrate that few of these structures were likely to be contemporary. Combining several strands of evidence, it was suggested that there were at least

four recognizable phases to the development of the settlement, with only two or three buildings standing together at any one time. With no stratigraphic associations to lead off, these observations were largely based on the comparison of roundhouse footprints and the identification of distinctive hallmarks in architectural technique/tradition. This was not, then, a nucleated or agglomerated settlement in the strictest sense, but a swathe of remains created over a fairly long period of time, perhaps spanning the whole of the Early Iron Age, c. 800–350 BC.

In reality, the definition of set phases in this context is probably somewhat misleading, as the settlement is likely to have evolved in an organic fashion. Different zones of the site would have probably come in and out of focus, with features being constructed, abandoned, reworked or renewed at timescales beyond our dating resolution, or our ability to untangle them in a completely satisfactory way. The problem is further compounded by the fact that we view the King's Dyke settlement through the letterbox of a fairly narrow excavation window, centred on an area where roundhouses seem particularly prevalent, but artefact-rich pits or other features that may lend a sense of ordered zoning are absent.

These points aside, in each 'phase', or at any one moment, we are probably dealing with what amounts to a fairly typical 'farmstead' of the period: a persistent focus for a small series of structures and a home for a constellation of people (most likely a kin group of some form) who probably lived together most of the time and shared many of the basic tasks needed to sustain themselves as a group. The character of the finds and scale of the debris from the sites would suggest that activities were organized at a fairly local level. The broken pots, pieces of saddle quern, loomweights and fragments of bone certainly speak of 'normal' domestic duties and the usual range of productive 'home craft' technologies we have to come to expect from these kinds of contexts – food preparation and cooking, spinning, weaving, butchery etc. Even where we see moments of activity outside of these daily routines, such as during episodes of formal dining in the roundhouses, the scale of the remains interred, both in terms of the lamb carcasses consumed and the pots used and broken, are evidence of only small-scale events involving members of the household, kin or possibly neighbours.

Pinpointing how the details of life at King's Dyke spoke more directly to the wider social landscape is far more difficult. Beyond commonalities in architecture and other material traditions around the Flag Fen Basin, there are no artefacts but the saddle querns (derived from sources at least 40–75 km away) that hint at participation in exchanges, or connections with

Figure 5.41 (opposite). Map and model of the Late Bronze Age settlement landscape in the Flag Fen Basin. Top. Selection of the 'isolated' finds-poor later Bronze Age structures from around the Flag Fen Basin. 1. King's Dyke, Roundhouse 12; 2. Bradley Fen, Roundhouse 4; 3. Newark Road, Structure 1 (Pryor 1980, 51, fig. 34 (Note the similarities in the wall-trench to that of Roundhouse 5, King's Dyke)); 4. The Elliott Site, Structure 1 (Evans & Beadsmoore 2009, 84, fig. 3.25); 5. Cat's Water, Structure 46 (Pryor 1984, 26, fig. 20); 6. Newark Road, Structure 2 (Pryor 1980, 51, fig. 34); 7–8. Edgerley Drain Road, Structures 2 and 3 (Beadsmoore & Evans 2009, 146, fig. 4.24); 9. Tanholt Farm (Pattern 2009, 216, fig. 11).

more distant communities. Scarce too are other small finds like pieces of worked bone (gouges, pins, points, combs). With the exception of the bronze ring headed pin from waterhole F.945 at Bradley Fen, there are no artefacts of personal adornment in the assemblage. Of course, the absence or inclusion of some finds in the archaeological record is dependent on their past social value and/or the cultural logics that conditioned attitudes toward them at the point of deposition. Items of metalwork, for instance, are renowned for their rarity within Early Iron Age settlement contexts. Within the wider landscape, however, we know that the Flag Fen post-alignment continued to serve as a focus for the deposition bronze pins, rings and other dress accessories throughout this period (Coombs 2001).

Context can then dictate visibility when it comes to discussions of exchange or other social themes, as indeed can the nature of the materials themselves. For example, it seems likely that some pot would have been exchanged between local communities; particularly the decorated Fengate-Cromer style vessels. Given the level of accomplishment needed to produce these fineware vessels, coupled with the roles they seem to have played in formal dining in this context, these pots were potentially an attractive medium for gift exchange. The problem is tracking these networks, as vessels from around the basin were largely made with similar tempers and ingredients.

Overall, the practices that connected groups within this landscape and helped constitute a wider sense of community have left few tangible traces in the archaeological record. There are no enclosures, field ditches, pile dwellings or other large-scale constructions from this period that we can point to as evidence of inter-group endeavours. Instead, connections were probably recognized through a combination of kinship relations, casual encounters during daily tasks and more formal cooperative labour arrangements needed to meet the demands of the agricultural cycle. These would certainly have become more sharply focused during specific points in the year, when tasks such as

harvesting or herding required a work force greater than any single household. In terms of tending livestock, wider connections between groups would have become familiar in the to-and-fro of animals around the basin, the constitution of flocks and herds and their reworking through selective breeding and culling (Cooper & Edmonds 2007, 185).

Some of these moments required group participation, but also provided the context for feasting and celebration. The one insight we have on these large congregations comes from activities at Bradley Fen and is evidenced by the bone deposit at the base of waterhole F.528. Here were found the remains of at least six butchered cows that had been slaughtered simultaneously. This would have been major event, a spectacle even, and probably involved cattle from herds owned/tended by several groups (the sacrifice potentially being too great for any one household/herd alone). The quantity of beef yielded would have been enormous and, whilst some cuts may have been shared, consumed and the bones deposited in one go, as part of a feast, others were perhaps preserved for the future by drying, smoking and/or salting.

Again, our ability to detail the manner of these practices is extremely limited. What can be seen at the level of the wider landscape, however, is that the way that different parts of the terraces were utilized at King's Dyke/Bradley Fen, mirror those on the opposite side of the Flag Fen Basin, suggesting there was a common consensus on how the land was worked, settled and appropriated in this period. If we take the known location of settlements, for instance, we find that sites including King's Dyke, Tower Works, Vicarage Farm and the three settlement swathes at Tanholt Farm, all occupied terraces *above* the 2.5m contour, well away from the contemporary fen-edge (located around c. 1.0m OD). In fact, King's Dyke was the closest, lying within 0.3km of the wetland (Fig. 5.42; Table 5.19).

At present this context provides our most complete picture of Early Iron Age settlement in the basin, though it is set to be eclipsed by the remains from Tanholt Farm, once these are fully (re)phased and published. Tanholt Farm has fewer roundhouses, but the excavation area is larger, capturing more of the occupation scatters and the spaces in-between. Here, the three main 'cores' of earlier first millennium BC settlement are within 300–600m of one another, implying that site densities may be high on the basin fringes (Fig. 5.43). This is, to some extent, supported by finds above Fengate, where Wyman Abbott's discoveries in the Pre-War Gravel Pits effectively bridge the c. 600m long swathe of ground between the excavated sites at Tower Works and Vicarage Farm, suggesting a series of settlements dotted across this zone (Fig. 5.42). Of

Table 5.19. *Early Iron Age settlement, contour range, and distance from the fen-edge.*

Site	Contour range (m OD)	Distance from Early Iron Age fen-edge (km)
King's Dyke	2.5–3.3	c. 0.3
Vicarage Farm	4.8–5.2	c. 1.0
Tower Works	4.0–4.4	c. 0.5
Tanholt Farm (1)	3.5–4.0	c. 0.9
Tanholt Farm (2)	3.6–3.9	c. 1.2
Tanholt Farm (3)	3.5–4.3	c. 1.3

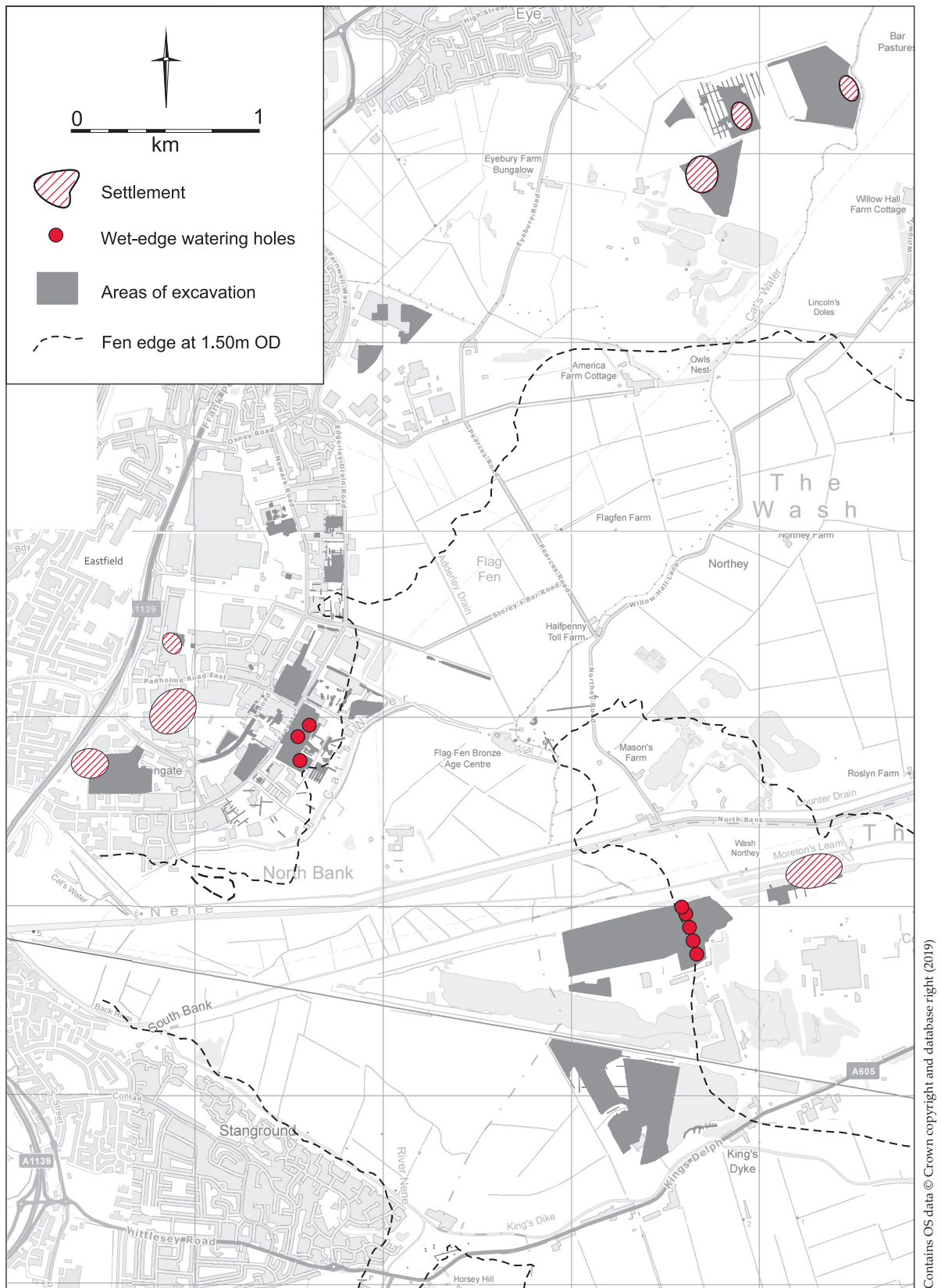


Figure 5.42. Early Iron Age settlement swatches and other contemporary features in the Flag Fen Basin.

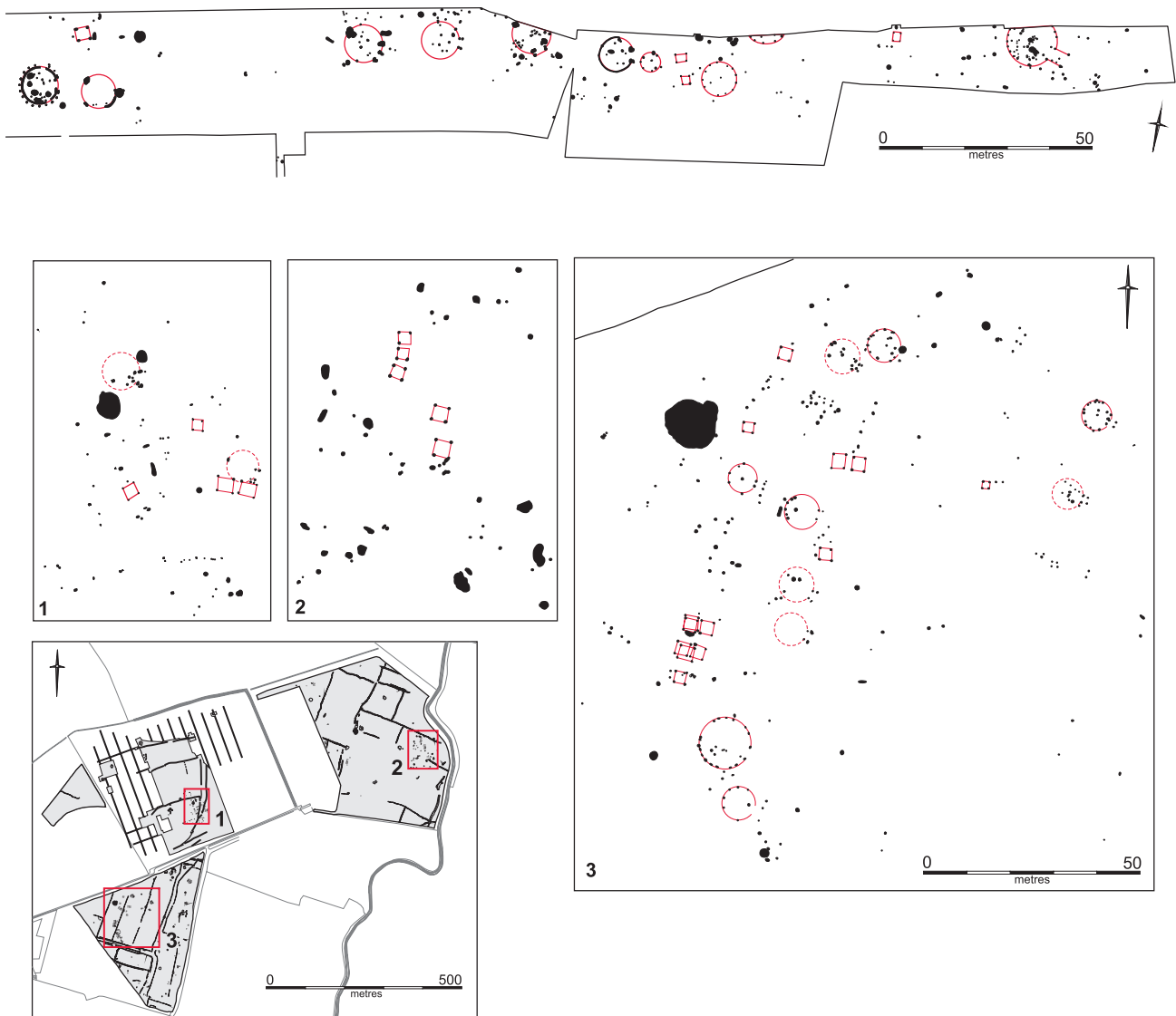


Figure 5.43. *The King's Dyke (above) and Tanholt Farm (below, with insets) Early Iron Age site plans.*

course, not every area between the 3–6m OD contour would have witnessed such intense Early Iron Age activity (as shown by the Broadlands excavations (Nicholson 2012)), but there is certainly enough evidence now to indicate that this period marked a real threshold in the visibility of later prehistoric settlement around the basin.

In contrast to the following period (see Chapter 6), the lower terraces below 2m OD, were not a focus for settlement *per se* in the Early Iron Age. Nor, as far as we can tell, was the wetland itself, at least not on the scale postulated for the Late Bronze Age (above). In fact, with the exception of seven fish bones from one posthole in Roundhouse 14, there are no other direct indicators of wetland exploitation from the site.

This may be a product of sampling procedures, since fish and small bird bones are rarely recovered from unsieved or unfloated contexts. However, it is equally possible that the move of settlement away from the wetland at the start of the Early Iron Age coincided with a decline in the importance of fen-derived resources. At present, it is very difficult to judge what the changes in subsistence economy were across the Bronze Age–Iron Age transition in this landscape. Both periods saw mixed agricultural regimes. The evidence from King's Dyke suggests a range of cereals were stored, processed and consumed at the site and were probably grown on the surrounding dryland terraces. But whether or not cereal cultivation became more intensive in this period is impossible to say.

The pollen and plant macro-fossil signatures from Bradley Fen certainly imply that the lower damp-ground terraces remained grassland throughout both periods. Boreham's observation that there was consistency in stewardship in this part of the landscape matches the archaeological evidence, with only waterholes and wells being constructed along this zone. These pastures and water-features were the preserve of livestock, whose butchered remains dominate the faunal remains at Bradley Fen, much as they did in the Middle Bronze Age. The faunal record from King's Dyke, however, offers a very different picture, with sheep being the primary species. In reality, both signatures are the consequence of specific depositional practices which skew our sense of their relative importance to the subsistence economy. That said, on the basis of a more general survey of Early Iron Age sites in the Flag Fen Basin and the western fen-edge, cattle seem slightly more dominant, though it is evident that patterns were less sharply defined than those from the later Bronze Age.

Returning to the basin itself, we can once again see that the character and location of features along the lower damp-ground contours at Bradley Fen mirror those on the Fengate shoreline. This is most visible at Cat's Water and the Elliott Site, where the only fixtures of Early Iron Age date were wells and waterholes (Fig.

5.42). Admittedly, these features are not exclusive to the lower contours in the basin (as waterholes at Vicarage Farm, Broadlands and Tanholt Farm show), but at present, they are the *only* kinds of occupation-related fixtures evidenced in this zone. Of special mention is well F.1551 at Cat's Water which contained a placed semi-complete Early Iron Age fineware vessel at its base (Pryor 1984, 115, fig. 89). The character of the pot, the manner of its interment and the context of deposition directly parallel some of the practices at Bradley Fen, providing another glimpse into how certain traditions were shared more broadly amongst the basin's communities. The reasons for each deposit may have varied and at Bradley Fen it was suggested that some things were interred as part of acts involving the construction and decommissioning of waterholes. Given that these features seem to be spaced in relation to the formal Middle Bronze Age field boundaries, it is tempting to view these practices as being in some way bound up with the way in which claims on the land were reworked and *redefined* in the post-fieldsystem world. On this final point, it seems that any lingering influence that this older landscape grain held was finally eroded over the course of the Early Iron Age and, as demonstrated in the following chapter, had no bearing on settlement in the Middle Iron Age.

Pattern and Process

The King's Dyke and Bradley Fen excavations occurred within the brick pits of the Fenland town of Whittlesey, Cambridgeshire. The investigations straddled the south-eastern contours of the Flag Fen Basin, a small peat-filled embayment located between the East-Midland city of Peterborough and the western limits of Whittlesey 'island'. Renowned principally for its Bronze Age discoveries at sites such as Fengate and Flag Fen, the Flag Fen Basin also marked the point where the prehistoric River Nene debouched into the greater Fenland Basin.

A henge, two round barrows, an early fieldsystem, metalwork deposition and patterns of sustained settlement along with metalworking evidence helped produce a plan similar in its configuration to that revealed at Fengate. In addition, unambiguous evidence of earlier second millennium BC settlement was identified together with large watering holes and the first burnt stone mounds to be found along Fenland's western edge.

Genuine settlement structures included three of Early Bronze Age date, one Late Bronze Age, ten Early Iron Age and three Middle Iron Age. Later Bronze Age metalwork, including single spears and a weapon hoard, was deposited in indirect association with the earlier land divisions and consistently within ground that was becoming increasingly wet.

The large-scale exposure of the base of the Flag Fen Basin at Bradley Fen revealed a sub-peat or pre-basin landscape related to the buried floodplain of an early River Nene. Above all, the revelation of sub-fen occupation helped position the Flag Fen Basin in time as well as space.

*Published by the McDonald Institute for Archaeological Research,
University of Cambridge, Downing Street, Cambridge, CB2 3ER, UK.*

Printed by Short Run Press. Distributed by Oxbow Books.
Cover design by Dora Kemp, Ben Plumridge and Mark Knight.

ISBN-13: 978-1-902937-97-7



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