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OLD KEMPSHOTT LANE, BASINGSTOKE

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ABSTRACT

Excavations at Old Kempshott Lane, Worting, Basingstoke, revealed evidence of a Late Iron Age to Romano-British enclosure, grain storage, and traditions involving disposal of the dead. Indirect evidence of near-by habitation, grain storage and animal management was found. Deliberately placed deposits recovered from Iron Age features and a 3rd to 4th century AD inhumation within a quarry pit suggest traditions practised in the Iron Age persisted into the Roman period.

INTRODUCTION

In September 2006, Pre-Construct Archaeology Ltd began an archaeological evaluation and subsequent rescue excavation on land adjacent to Old Kempshott Lane, Worting, Basingstoke, NGR SU 602514 (Fig. 1). The project was undertaken between 18th September 2006 and 5th March 2007 in advance of a residential development on the site. The site was assigned the code POKB06.

Excavation strategy

Initially, 105 evaluation trenches, all approximately 2 m wide and 26 m long, were machine excavated down to the top of archaeologically sensitive levels. They were distributed evenly across those parts of the site scheduled for development in order to explore the archaeological potential of the affected areas. Thirteen trenches contained evidence of human activity, which were clustered in four distinct areas. Further mitigation was therefore necessary, and a written scheme of investigation was designed (Moore 2006) and approved by the Hampshire County Council Planning Advisor. Three excavation areas, numbered 1 to 3, were opened for investigation, situated in the locales highlighted by the evaluation (Fig. 2).

Approximately ten percent of all ditches were sampled, including all corners and termini. Pits were half sectioned. Where unusual deposits (referred to throughout the ensuing text as 'exceptional') were encountered, pits were fully excavated after a section had been drawn. The large Roman quarry pit was initially sampled by way of a 1.5m deep hand-dug slot excavated across the centre of the feature and the remaining fill excavated by machine. After the grave containing the human skeleton was found in the base of the slot, the remaining backfill was fully excavated by hand.

The investigations revealed evidence of human activity, ranging in date from the Early Holocene to the Roman period.

Topography

The highest point on the site was situated in the southern corner, in the approximate location of Area 3, at a level of 109.87 m OD. The land surface dipped down from this point to 107.38 m OD in the location of Area 1, before rising again to 111.31 m OD in the western corner. This dip formed a 'dry valley' that sloped from the higher ground in the southwest towards the lowest point, centrally placed along the northern boundary at a level of 101.49 m OD. Area 2 was positioned towards the higher, southwestern end of the 'dry valley' on the southern side.

Fig. 1 Site location

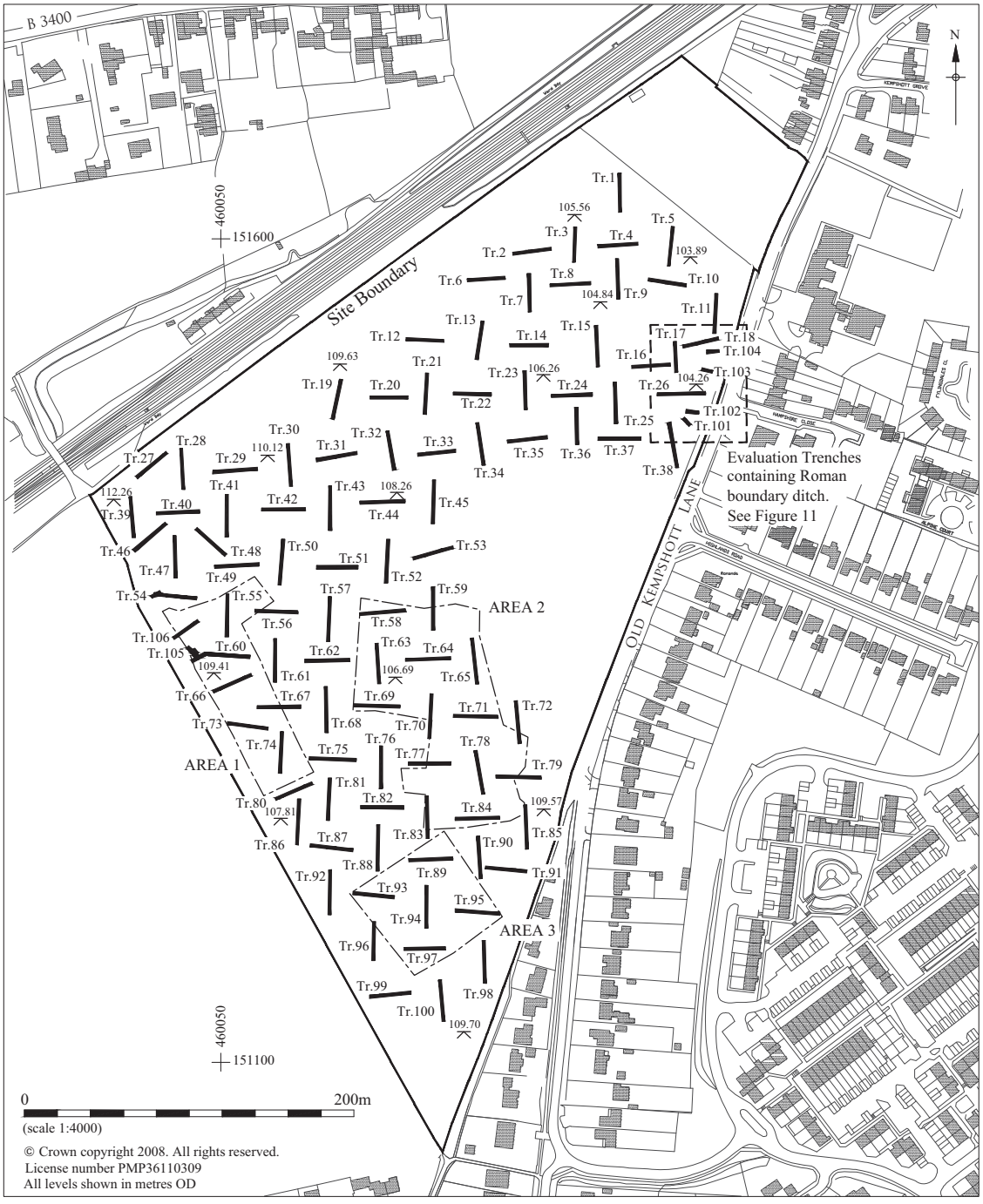

Fig. 2 Excavation areas

ARCHAEOLOGICAL BACKGROUND: THE SITE IN CONTEXT

The Early Holocene

Mesolithic activity is generally not well represented on Hampshire's chalk downland, perhaps due to the masking effects of later flint work (Jacobi 1981, 15; Shennan 1981, 111). However, a substantial flint scatter was found on Wellock's Hill on the outskirts of Basingstoke (Jacobi 1981, 17) along with a few chance Mesolithic finds (Hawkins 2006, 5), which suggest low-intensity exploitation of the area during the period.

The region sees a surge in monument building in the Neolithic and Bronze Age periods (Fasham & Schadla-Hall 1981, 26–27). Three monuments described as ring ditches are recorded on Hampshire's HER as being within the site itself, in the location of Area 3 (Hawkins 2006, 8). Four round barrows are recorded on Kite Hill to the immediate south (*ibid*, 8), one of which was excavated in the 1970s. It has been suggested that barrow cemeteries of this kind could have served as 'landscape monuments', perhaps foci for community activities (Woodward 2000, 49–50) and the Kite Hill features could have functioned in this way. They would have been visible from other clusters of barrows to the east, west and south and from a prehistoric trackway known as The Harroway, which ran past the south of the site in an east-west direction (Allen *et al.* 1995, 185). Environmental samples taken from the only excavated Kite Hill example, known as the Buckskin Barrow, provided evidence for feasting (Allen *et al.* 1995, 185; Allen & Applin 1995, 55). This suggests that the area had acquired symbolic significance by the Bronze Age.

The Iron Age

Permanent or semi-permanent settlement in the region appears to have intensified during the Iron Age, becoming increasingly archaeologically visible. Indeed, the first phase of enduring occupation at Old Kempshott Lane appears to date to the beginning of this period. The site probably represents one of many similarly sized farmsteads in the hinterland of Winklebury Camp, an Iron Age hill fort situated *c* 2 km to the northeast (Fig. 1). It was partially excavated in the 1970s, prior to the construction of a new housing estate. The remnants of ramparts (Robertson-Mackay 1977, 133–5), possible roundhouses, four-post granaries, pits, grain storage features and gullies were uncovered (Smith 1977, 35–52). The site appears to have been occupied from the 6th to the 1st century BC, and it may have been a higher status centre occupied by a controlling elite, or could represent a 'special purpose site', perhaps for the storage of surplus grain (Fisher 1985, 179). Either way, it probably played an important role in the lives of the occupants of Old Kempshott Lane.

The evidence unearthed to date suggests the environs of the hill fort were densely occupied, perhaps more so than adjacent areas in the region. However, this perceived population concentration may be due to an increase in developer funded rescue excavations caused by the growth of Basingstoke's suburbs rather than reflecting real demographic differences.

Excavated examples of contemporary small-scale Iron Age habitation sites in the vicinity of Old Kempshott Lane include Ructstalls Hill (Oliver & Applin 1978, 41) *c* 4.5 km to the east, Viables Farm (Gibson 2004, 1; Millett & Russell 1984, 49) *c* 3 km to the southeast, Cowdery's Down (Millet & James 1983, 151) *c* 6 km to the northeast, Oakridge (Oliver *et al.* 1992, 55) *c* 4 km to the northeast, and Brighton Hill South and Beggarwood Lane (Fasham, Keevil & Coe 1995; Fasham 1987, ix) *c* 3 km to the south. All were continuously occupied from the Iron Age to the Romano-British period. The settlements represented here were positioned on the on the crest or shoulders of dry valleys, indicating a preference for higher ground.

Aerial photographic evidence for possible Iron Age 'banjo' enclosures was found at Smalls Copse to the southeast, Laverstoke Wood and Blackwood, both just over 10 km to the southeast, South View *c* 4 km to the northeast (Gibson 2004, 3–4) and a site known as the Worting banjo enclosure in the fields to the immediate south and west of the site itself (Hawkins 2006, 9). A further example,

preserved *in situ*, was also identified at Beggarwood Lane (Coe *et al.* 1995, 67).

The Roman period

Basingstoke is situated between the Roman towns of *Calleva Atrebatum* (Silchester), approximately 10 km to the north, and *Venta Belgarum* (Winchester), approximately 25 km to the south. Old Kempshott Lane was well connected with both, as a Roman road linking the two ran past the site, forming its eastern boundary (Hawkins 2006, 9).

Settlement patterns in Hampshire suggest that the arrival of the Romans initially had little direct impact on smaller scale 'native' occupation sites, except in terms of ceramic changes. Johnston (1981, 48) suggests that, by the early 2nd century AD, abandonment of some of these farmsteads can be recognised archaeologically. Enclosure ditches are frequently in-filled and evidence of habitation is reduced. However, site sequences in the Basingstoke area appear to be more complex than this. For example, Ructstalls Hill was intensively occupied during the Iron Age and early Roman periods, with a break of approximately 150 to 200 years (Oliver & Applin 1978, 90) before less intensive re-occupation in the late 3rd to 4th century (*ibid*, 56). Sites B/C and K at Brighton Hill South were apparently abandoned in the third or fourth quarter of the 1st century AD, the focus of activity shifting towards Site X/Y in the 2nd to 3rd century (Coe *et al.* 1995, 73). At Cowdery's Down, the focus of settlement had shifted away from the excavation area by the Late Roman period (Millett & James 1983). Viables Farm provided evidence of occupation from the 1st century BC to the 1st century AD with decreased activity in the 3rd to 4th centuries (Millett & Russell 1984, 54). Whilst Oakridge was continually occupied from the Iron Age to the 4th century AD (Oliver *et al.* 1992, 55), 3rd to 4th century evidence was very slight (*ibid*, 70–71).

EXCAVATION RESULTS

In light of the influential study by Hill (1995), a contextual approach has been taken in order to assess the formation processes that took place on the site. The way material entered the ground has been scrutinised in order to draw more rigorous conclusions concerning the nature of the society that produced the archaeological record at Old Kempshott Lane. The ensuing text will also place the results of the excavation in a wider context through comparisons with similar local and regional sites.

Phase 1: natural geology

The site is situated on Cretaceous chalk capped by densely packed, angular chalk gravel, formed from the bedrock as a result of periglacial cryoturbation. With the exception of the two highest points, silty clay with flints sealed the chalk gravel across the entire site, becoming thicker further down-slope, probably as a result of colluvial action.

Phase 2: Early Holocene

Pollen profiles from the region suggest tree clearance commenced on a limited scale during the Early Neolithic, intensifying towards the end of the period (Fasham & Schadla-Hall 1981, 27). This probably formed part of a gradual trend towards increased agricultural exploitation and formalisation of the southern British landscape, including the evolution of co-axial field systems and linear ditches in the Middle Bronze Age and Iron Age. Possible evidence for such deforestation at Old Kempshott Lane consists of seven possible tree-throw features. The mechanics of tree throw hollows have been widely discussed (e.g. Evans *et al.* 1999) and it is possible that they provide evidence of primary clearance and settlement. Alternatively they may reflect natural tree throws resulting from trees falling in storms as a result of being diseased or damaged in some way. A series of ditches and an enclosure had been constructed on the site by the Middle to Late Iron Age and indirect evidence for Early to Middle Iron Age cereal cultivation and animal husbandry was found. Farming of this nature needed a fairly open environment in order to provide crops with sufficient sunlight and growing space and relatively open land in order to make possible the construction of effective corrals, drainage

and boundary ditches. It is therefore likely that removal of all or some of the trees either predates the Iron Age or occurred early in this period.

No traces of the barrows recorded on the HER were found in Area 3. Two large, circular, periglacial sinkholes were unearthed in the projected barrows' approximate positions. These could have produced crop marks or undulations in the ground surface that were misinterpreted as ring ditches. Alternatively, intensive modern ploughing may have removed any evidence of them. Area 3 was situated on one of the highest points on site and was devoid of sub-soil, probably as a result colluvial action. Little protection would therefore have been offered to any underlying features.

Evidence of Early Holocene activity on the site was limited. A large dispersed lithic scatter was uncovered, along with the possible tree throw features discussed previously. The lithic scatter was in Areas 1 and 2, the bulk being concentrated in Area 1. The flints were either unstratified, having been reworked by ploughing into the overlying sub-soil, or residual, having been re-deposited in later Iron Age or Roman features. Typological analysis suggests the assemblage accumulated gradually between the Mesolithic and the Bronze Age. Few waste flakes were found, suggesting little or no flint knapping occurred at the site. Tool production therefore presumably took place elsewhere. The flint scatter suggests low key, intermittent stopovers by mobile family bands during the Mesolithic, Neolithic and Bronze Age. Perhaps the site and its environs were used for temporary camps throughout the Early Holocene before being settled on a more permanent basis in the later prehistoric period. The surrounding area would certainly have been a focus for Bronze Age communities, as demonstrated by the presence of the near-by Buckskin Barrow (Allen & Applin 1995, 52).

Phases 3, 4 and 5: the Early/Middle Iron Age to Late Iron Age/early Romano-British period

The majority of the Iron Age features unearthed at Old Kempshott Lane could only be assigned a general Iron Age date as the artefactual evidence retrieved was insufficient to facilitate more accurate phasing. However, more diagnostic sherds were found, those in Area 1 pertaining to the Early to Middle Iron Age or Late Iron Age to Early Romano-British period and those in Area 2 being Middle to Late Iron Age. Whilst it is possible that the focus of Iron Age activity may have shifted towards Area 2 in the later half of the period before shifting back towards Area 1, such a spatial and temporal division cannot be confirmed on the basis of the small number of confidently dated features. Settlement activity in Areas 1 and 2 is therefore best interpreted as commencing in the Early to Middle Iron Age, continuing, probably unbroken, into the early Roman period. No evidence of Iron Age or Early Romano-British activity was found in Area 3, which was archaeologically sterile.

Analysis of the Iron Age and Romano-British artefact assemblages from all features at Old Kempshott Lane produced an 'average material signature' that consisted of a few sherds of abraded pottery with low average sherd weights and weathered bone or one or the other of these artefact types. Some contained no finds at all. This is quite usual for the bulk of features on Iron Age sites (Hill 1995, 33). Such artefact assemblages probably do not represent the disposal of fresh material as their eroded nature suggests exposure to the elements. They may have been included within features accidentally, perhaps as a result of natural inwashing, or have been re-deposited after their removal from pre-existing middens or surface scatters. In all probability, such artefacts moved around the surface of the site by natural or human agents before their final deposition. This would produce a weathered, dispersed assemblage of mixed artefacts (*ibid,* 43), similar to that retrieved from the bulk of the features at Old Kempshott Lane.

Some deposits were significantly different to this, and are described in this report as 'placed'. Such deposits contained finds assemblages akin to one or more of the categories listed below. Types 1 to 5 were originally highlighted by Hill (1995, 39–40), whilst 6 and 7 are additional categories suggested by this author:

1 large assemblages of medium to small pottery sherds (over 20 fragments);

2 complete pottery vessels or small assemblages of unabraded, freshly broken or carefully curated large pottery sherds;
3 large deposits of animal bone, often from a single species; sometimes articulated or semi-articulated or forming an associated bone group;
4 any human remains;
5 large fragments of broken querns, loom weights or two or more small finds;
6 large assemblages of sharp, unabraded, worked flint;
7 deposits composed of a visibly high component of burnt debris in the form of charcoal and burnt flint.

'Placed' deposits like those listed above were almost certainly deliberately positioned and are indicative of Iron Age practices. The processes responsible for their formation will therefore be discussed in the following text. The 'overall associations' (*ibid,* 70) of different contexts within deeply stratified features will also be considered in order to establish the sequence of events that resulted in their formation.

Pits

Three loose clusters of pits were uncovered in Area 2, termed Pit Groups 1, 2 and 3, along with a number of isolated pits in Areas 1 and 2.

Ten relatively small, sub-circular to ovoid pits were found in Area 1 (Fig. 3), numbered [15], [113], [115], [119], [127], [129], [352], [355], [357] and [368]. Contexts [15] and [368] contained dating evidence in the form of rare, small fragments of ceramic material typologically characteristic of the Iron Age or Early to Middle Iron Age. As the bulk of archaeological activity in Area 1 appeared to date to the Iron Age, all undated pits in the vicinity have also been classed as such on the balance of probability. It should be remembered, however, that some might predate or postdate this phase, as other archaeological periods, particularly Roman, do occur in proximity to them. Exceptional finds of note include a fragment of a saddle quern composed of Lodsworth Greensand, retrieved from the base of pit [368] and a large assemblage of 84 sharp, unabraded flints recovered from pit [15] in Area 1, which were probably knapped elsewhere.

Pit Group 1 was situated to the southeast of Area 2 (Fig. 4). Seven pits formed the group, five of which, contexts [192], [201], [219], [227], [242], were large and circular with highly structured fill sequences. These were deemed to have been originally created for the specific function of grain storage and will be discussed later. A further two, small, circular pits were also present, numbered [156] and [173]. They were interpreted as being Iron Age in date as a result of the presence of occasional diagnostic pottery sherds in their primary fills. Pit [173] had been deliberately backfilled with burnt material and pit [156] contained a triangular loom weight, neatly placed on its base and sealed by a charcoal rich deposit, containing 123 sherds of Iron Age pottery and 1 fragment of cattle-sized animal bone.

Pit Group 2 consisted of eight features situated to the northwest of Pit Group 1 within Area 2. These were termed contexts [251], [253], [261], [264], [269], [274], [288] and [295]. All diagnostic pottery found within was of Iron Age, more specifically Middle to Late Iron Age date. Several of the pits contained 'exceptional' deposits (Fig. 5). Pit [253] contained three fragments of timber planks placed on the base, sealed by charcoal rich material. They had clearly been worked, the most obvious example being context [275], which had a possible joint on one side. A burnt fill was also observed at the top of the sequence in pit [274]. Circular pit [264] was situated to the immediate south. It had been backfilled with three deposits rich in burnt material and artefactual remains, including 151 large Middle to Late Iron Age pottery sherds, a fragment of lower rotary quern and an upper rubber from a saddle quern, both of Sarsen stone. Pits [295] and [288] were deemed to have originally been grain storage features and will be discussed later.

Two isolated rectangular features, contexts [190] and [184], were found in the west corner of Area 2 (Fig. 4). Both had been backfilled with deposits of burnt debris containing very frequent inclusions of heat-modified flint. A further six isolated circular pits were also unearthed, numbered [147], [167], [196], [271], [297] and [299]. No unusual deposits were found within any of these.

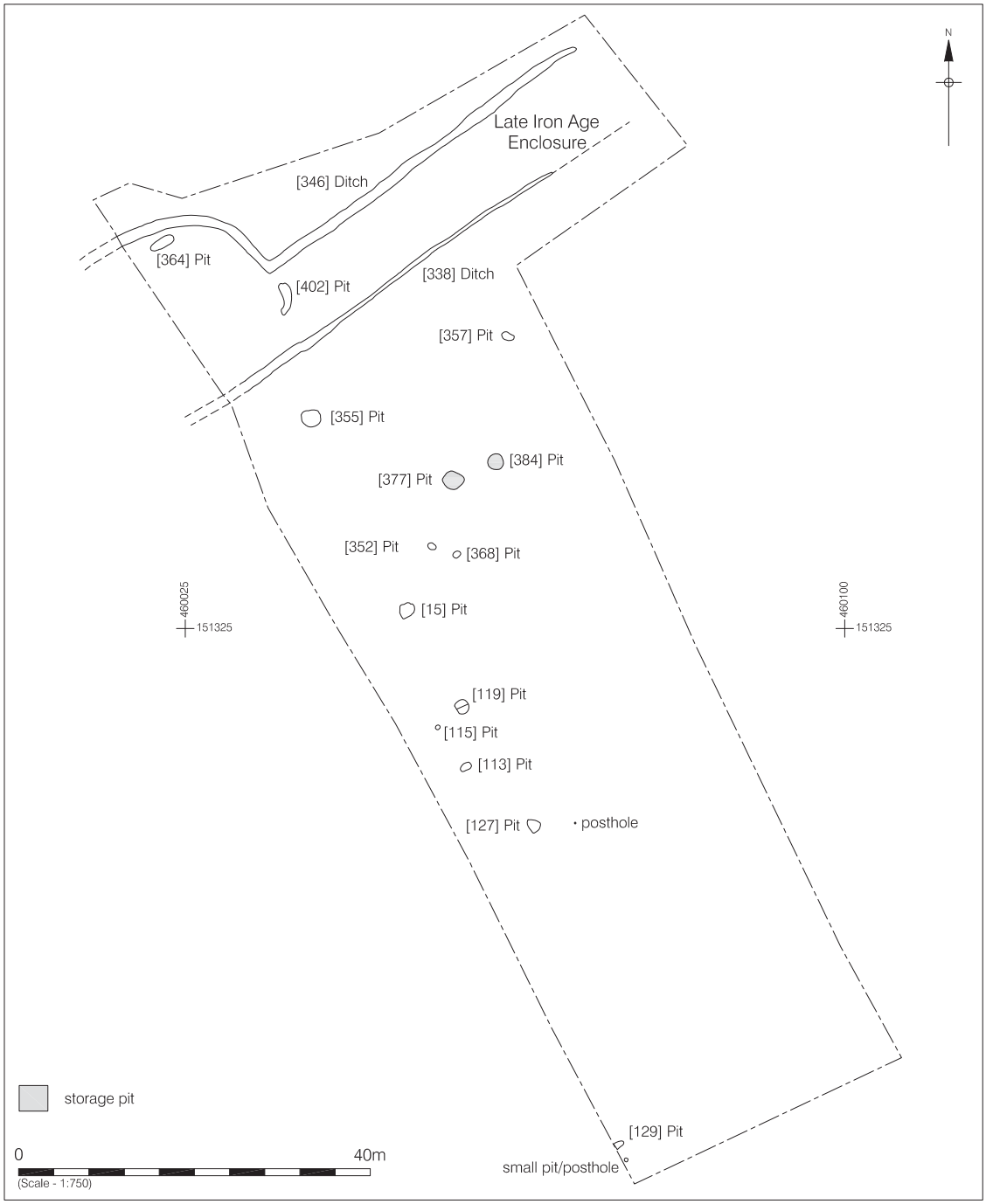

Fig. 3 Iron Age features in Area 1

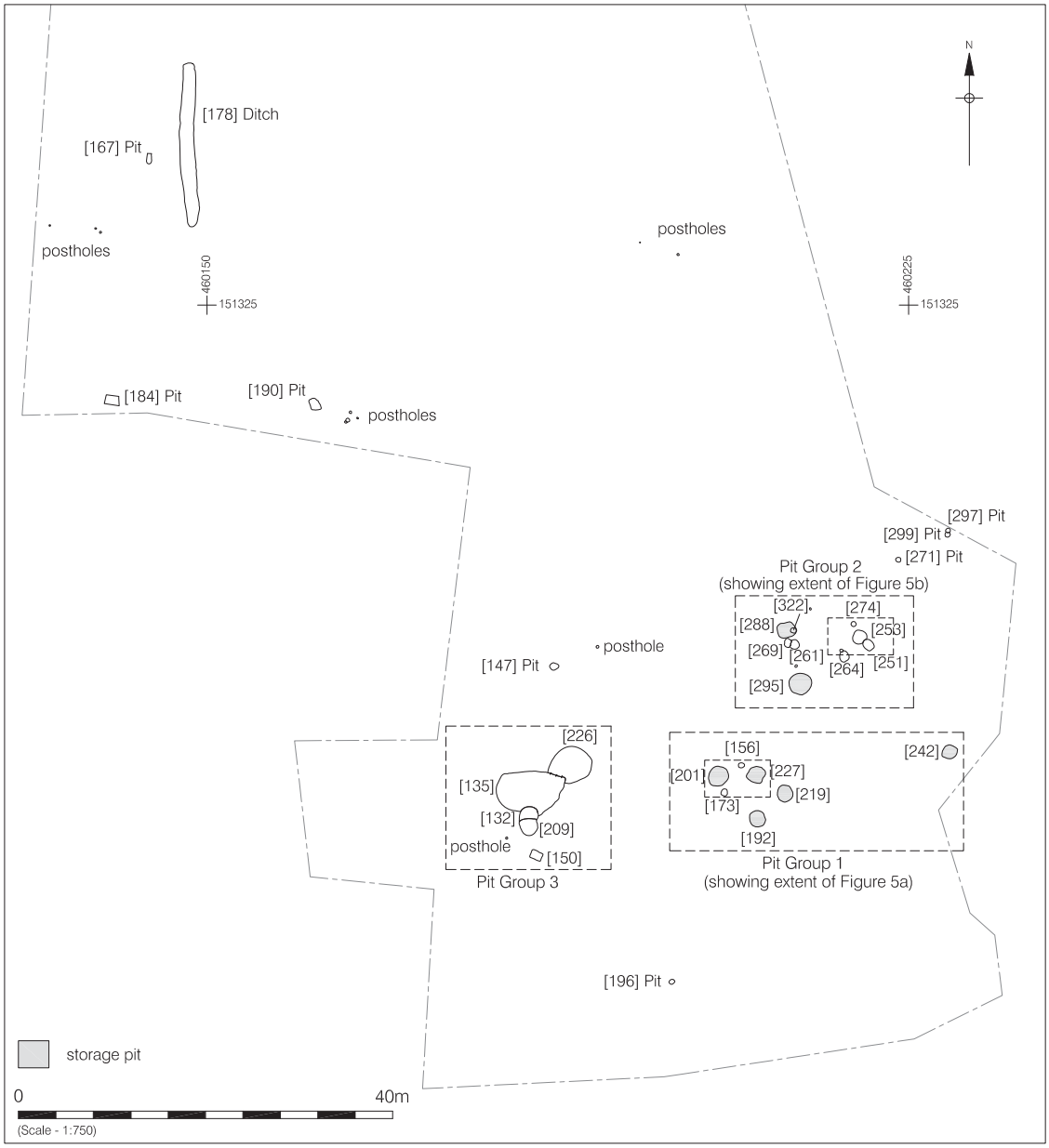

Fig. 4 Iron Age features in Area 2

Pit Group 3 was slightly different in character to Groups 1 and 2, consisting of four large intercutting features and one smaller, rectangular pit (Fig. 4). These were variably sized, ranging from 5.80m to 2m in length and 4m to 1.90m in width with depths of between 1.10m and 0.72m. Diagnostic pottery sherds recovered from some suggest they were infilled during the Middle to Late Iron Age. The earliest of the four, context [226], was a large, sub-circular feature,

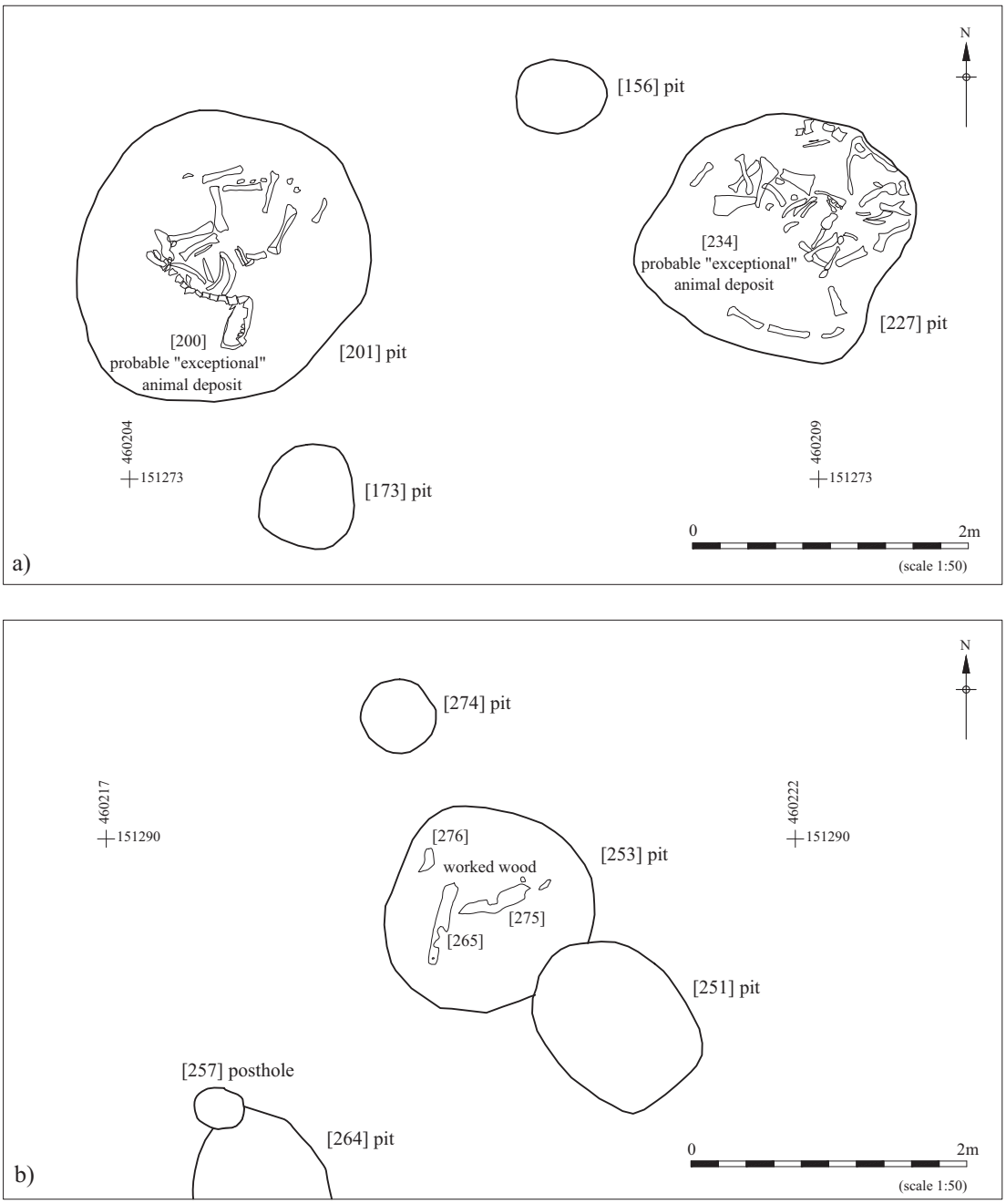

Fig. 5 Details of Iron Age 'placed' deposits, Area 2

truncated along its southeastern edge by [135], a similarly shaped, slightly irregular sub-ovoid cut. This was truncated in turn by a further two ovoid pits, contexts [132] and [209]. The fifth pit, context [150], was rectangular in shape. The features had initially been backfilled with silty clay, which was sealed by material rich in charcoal and burnt flint. The natural clay surrounding the pits was not heat-discoloured or hardened suggesting this burnt material had been generated elsewhere and dumped here. In the case of pit [132], a ceramic vessel had been intentionally placed within a small niche cut into the edge of the feature, prior to deposition of the charcoal rich fill. The vessel was in poor condition, being extremely fragile. As a consequence, it disintegrated into 31 sherds after it was block-lifted.

The shallow nature and small volume of most of the pits in Areas 1 and 2 would have made them impractical for storage purposes. The excavation of small pits for the disposal of rubbish seems somewhat improbable. Whilst they could have been reused as such, mixed artefact assemblages suggestive of general waste disposal were not present. The pits either were empty, or contained very small assemblages suggestive of accidental inclusion, or were dominated by a single artefact type. Those which appeared empty may originally have contained material which left no archaeological trace. The functions of the larger intercutting features observed in Pit Group 3 remain uncertain. None of the pits was of sufficient depth to impinge upon the underlying, free-draining chalk gravel, their bases being composed of impermeable silty clay. They would therefore have been damp, making them unsuitable places for storing perishable organic materials for any meaningful length of time. The irregular nature of the two large intercutting pits, contexts [135] and [226], suggests clay extraction. Small-scale industrial activities, such as daub or pottery manufacturing, could have taken place on or near to the site during the Iron Age and the raw materials required would have been readily obtainable locally. Temporary limited capacity water storage is another possible function for these pits.

A disproportionate number of purposely damaged or 'killed' pots, querns and loom weights, relative to other forms of domestic material, are frequently found in pits on Iron Age sites. It has been speculated that these were sometimes chosen over other artefact types for disposal in certain locations. The deposits described above may have been deliberately placed in the ground in accordance with a set of widely held Iron Age beliefs (Hill 1995, 102). Identical thought processes may have been behind the inclusion of the flint assemblage within pit [15] and the timbers in pit [253]. Organic remains are underrepresented in the archaeological record, as they are prone to decay and rarely survive in non-waterlogged environments. It therefore remains possible that some of the seemingly empty pits once contained organic placed deposits that subsequently decayed. The complete pottery vessel, found within a niche in [132], represents another deliberately placed deposit. One theory suggests that certain objects such as quern stones, clay loom weights, metal objects and worked antler and bone were selected over other artefact types for such treatment as they represent the transformation of natural resources into useful objects by signifying the means of production (*ibid,* 67). Perhaps this extended to the transformation of clay, extracted from the earth, into pottery. Its re-interment into the ground from which the clay was mined could therefore be significant.

As detailed above, dumped charcoal rich debris with frequent inclusions of heavily heat modified flint was found at the top of three of the clay extraction features and several smaller pits in Area 2. Some form of craft process requiring high temperatures, such as pottery production or metalworking, could have resulted in these; alternatively, they may have been created for the specific task of closing the pits, two hypotheses that may not be mutually exclusive. In any case, the burnt debris appears to have been specifically chosen for the purpose of a closing deposit.

Storage pits

Nine large pits were unearthed in Area 1 and in Pit Groups 1 and 2 in Area 2 (Figs 3 & 4). These were all deeply intrusive, penetrating 0.65m or more into the underlying natural chalk gravel.

Table 1 Old Kempshott Lane: common Roman fabrics and quantification (codes after Tomber & Dore 1998)

Code	*Common Name*	*Sherd count*	*Weight (g)*
ALH RE	Alice Holt Reduced Ware	396	4712
BAT AM	Baetican Amphorae	7	535
DOR BB1	Dorset Black Burnished Ware	9	65
NFO CC	New Forest Colour Coated Ware	1	160
SAM	Samian	13	42
SAMSG	South Gaulish Samian	9	115
VER WH	Verulamium Region White Ware	8	128

The features were of substantial size, being between 1.5m and 2.02m in diameter and 0.7m to 1.75m in depth. They formed three loose groups, the first being situated in Area 1 and the second in Area 2. Whilst they were broadly similar, significant differences exist both between and within the two groups.

The first group, situated in Area 1, consisted of two pits located side by side, represented by contexts [377] and [384] (Fig. 6). Both had bell-shaped profiles and included a little pottery typologically typical of the Iron Age or Early to Middle Iron Age in their upper fills (see Table 1). These fills could have been deposited at a later date to their lower counterparts, perhaps to infill slumps caused by subsidence as the earlier backfill settled. The small number of abraded sherds could also be residual, having been accidentally incorporated after a long spell on the surface. The second group, located in Area 2, consisted of seven features, contexts [192], [201], [219],

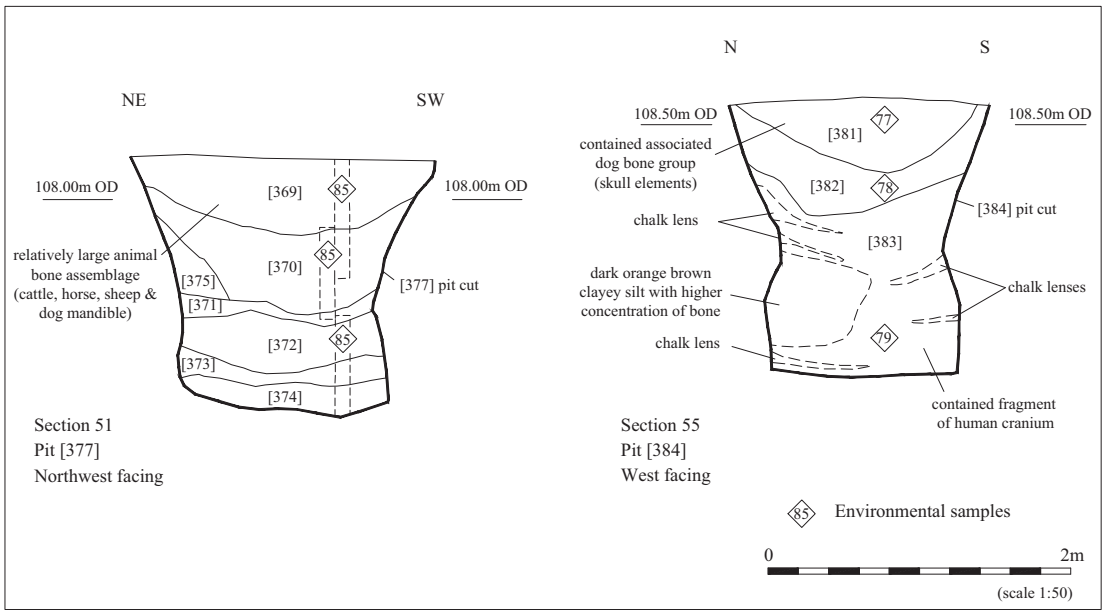

Fig. 6 Area 1 Iron Age storage pits: sections showing 'placed' deposits

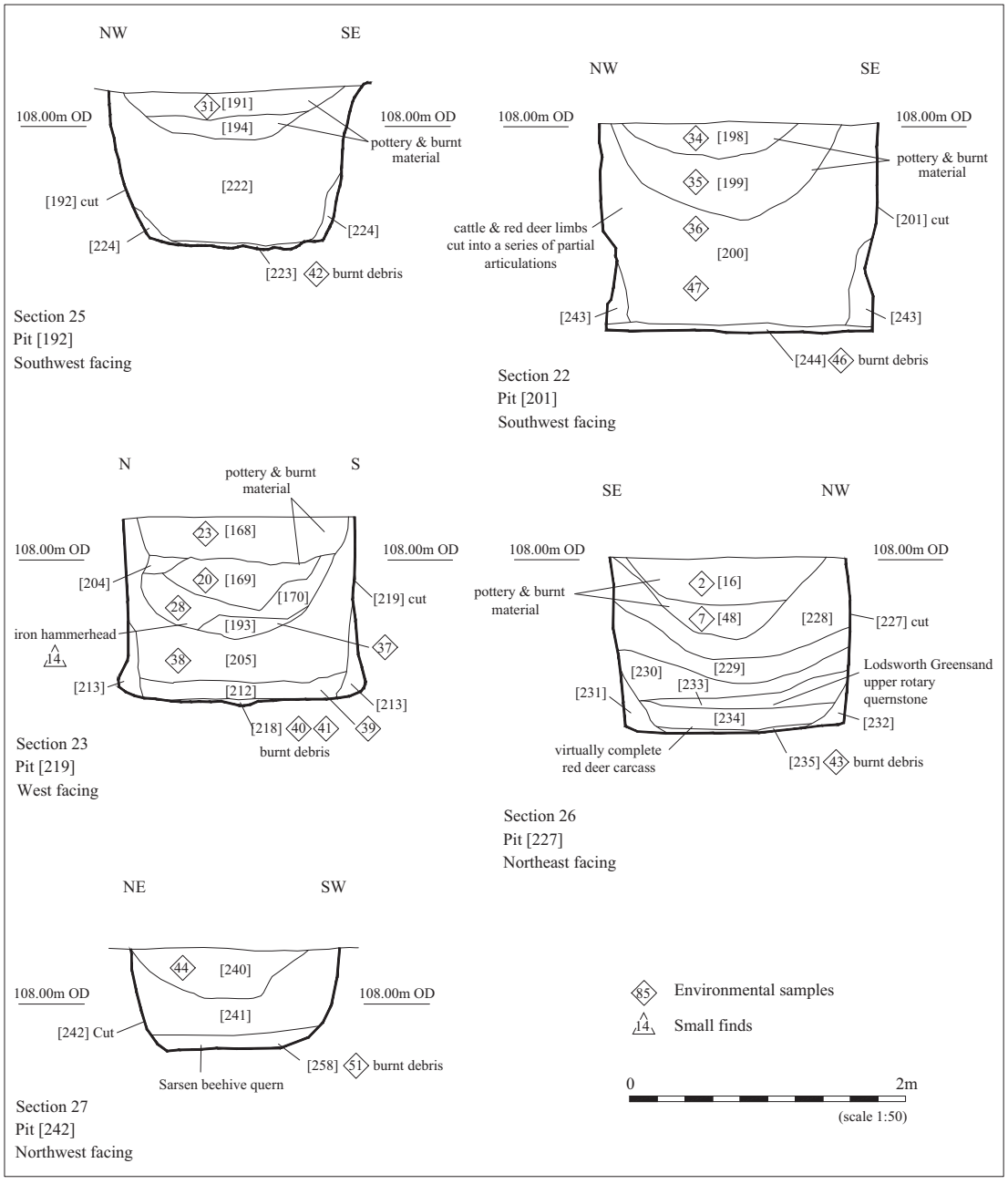

Fig. 7 Area 2 Iron Age storage pits (Pit Group 1): sections showing 'placed' deposits

[227], [242], [288] and [295] (Figs 7 & 8). These had rectangular rather than bell-shaped profiles and contained one or two fills, rich in burnt material, at the top and bottom of their backfill sequences. The only exceptions were pit [242], which did not have such a deposit

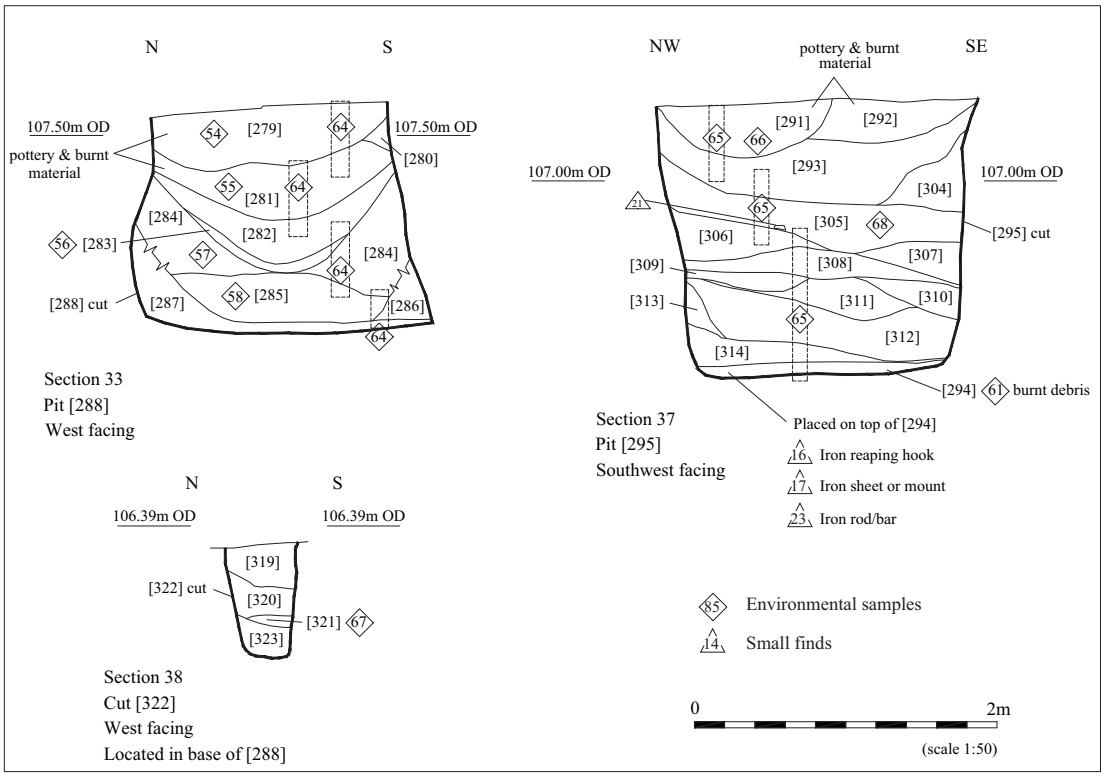

Fig. 8 Area 2 Iron Age storage pits (Pit Group 2): sections showing 'placed' deposits

at the top, and pit [219], which did not have one at the base. The features probably date to the Iron Age, as they contained diagnostic pottery of Middle to Late Iron Age date. Whilst the pottery assemblages were larger than those retrieved from the pits in Area 1 and are almost certainly not residual, they were also predominantly found in the upper fills. They therefore cannot be used to refine the dating as they could have been deposited some time after the features were created and their lower backfill sequences deposited.

Very similar pits have been found on other sites in the region, including Winklebury Camp (Smith 1977, 42; 44–48), Brighton Hill South (Coe *et al.* 1995, 69–71), Viables Farm (Millett & Russell 1984, 54) and Ructstalls Hill (Oliver & Applin 1978, 46). In fact, features of this nature have been recognised on Iron Age sites throughout south central England and beyond and are deemed to represent a characteristically Iron Age practice (Haselgrove & Pope 2007, 5). They have been widely interpreted as cereal depositories (Reynolds 1974, 118; Cunliffe 2002, 375), a theory supported by experimental and ethnographic parallels (Reynolds 1974, 119; Hill 1995, 18). The features at Old Kempshott Lane would have been free draining and relatively dry, penetrating 0.7m or more into permeable chalk gravel, making them suitable for such a purpose. Efficient storage may have been achieved through use of an airtight clay seal (Reynolds 1974, 124), a watertight cover or a pitched roof (Schmidt 1998, 2). Only pit [288] provided evidence for a possible roof, in the form of posthole [322] cut into its base. If the majority of the features were sealed with clay, regular, repeated access would have been difficult, suggesting they did not contain grain destined for everyday consumption (Cunliffe 2002, 376). The majority of the pits at Old Kempshott Lane may have

contained seed corn, interred for the liminal time between harvesting and sowing.

In the case of pits [192], [201], [227] and [242], the grain storage interpretation was further supported by the environmental samples from the burnt basal fills, which all produced significant assemblages of carbonised cereal grain (over 200 grains per context). Such large quantities were not retrieved from any of the later fills. This suggests that these basal deposits were still *in situ*. Whilst the chalk gravel natural surrounding the pits did not appear heat affected, a short lasting fire would not necessarily leave much evidence for its passing. 'Burning out' may have been required in order to remove the encrusted, fermented remains of the old seed corn crop to sterilise the feature prior to reuse. This may also have been considered necessary before the pits' final closure. Similar burnt deposits have been found in grain storage features on other sites in the region including eight pits at Brighton Hill South (Coe *et al.* 1995, 71). At Old Kempshott Lane, the assemblage was dominated by spelt, emmer and barley, along with lesser amounts of free-threshing wheat. It is suggested these crops were grown on or near the site and stored in the pits. Small amounts of chaff were recovered relative to grain, indicating the crop had been threshed and partially sorted prior to burning. Such processing would maximise space for the useful element of the crop. The weed seeds recovered suggest autumn sowing continued into the Late Iron Age at Old Kempshott Lane. This may be significant, as the seed corn assemblage contained significant quantities of spelt, a crop hardy enough to be sown in the winter due to its resistance to fungus and damp and its ability to tolerate cold weather (Champion & Champion, 1981, 37).

Samples taken from the basal fills of pits [219], [288], [295] and [384] did not produce strong evidence in support of the sterilisation hypothesis. Just a few charred grains were recovered from the silty basal fill of [288], which instead contained a large amount of burnt stone. None were recovered from a similar basal fill in pit [384]. Although burnt basal fills were observed in pits [219] and [295], no cereal remains were retrieved. Instead, the assemblages were dominated by carbonised oak. Whilst oak may have been used as an accelerant to facilitate the sterilisation process, some carbonised cereal grains would be expected. The small number of burnt caryopses and glume bases in the silty basal fill of pit [288] may represent material from an episode or repeated episodes of sterilisation prior to reuse. Alternatively, they could have been imported and dumped along with the burnt stone or represent residual 'background' material that washed in accidentally. The lack of cereal grains in the burnt basal fills of pits [219] and [295] suggest the spoiled crop was either thoroughly cleaned out by hand prior to sterilisation or these pits were used to store other perishable resources, a possibility noted by Cunliffe (2002, 376).

The vast majority of the storage pits contained deeply stratified fills. Whilst each was unique, a similar sequence of events appears to have led to the formation of all of them. As discussed previously, six of the nine pits contained burnt fills in their bases that may have been produced by *in situ* burning. In the remaining three, material resembling dumped or washed-in redeposited natural was observed. Stratigraphic evidence of natural silting was noted close to the base of pits [192], [201], [219], [227] and [295]. Small mammal and amphibian bones were also recovered from a deposit of silty clay above the basal fill in pit [201], suggesting the feature acted as a pit trap. The available evidence therefore suggests that some of the features stood open and unattended without a final clean-out for some time before and / or after the basal fills formed. The pit profiles were all very sharp, suggesting they had not been significantly affected by erosion. Experiments undertaken at Micheldever Wood suggest empty pits would be subject to weathering. Over the course of four winters, most pits became increasingly ragged in profile, with beehive or bell-shaped overhangs being especially prone to collapse (Fasham 1987, 73–75). The storage pits at Old Kempshott Lane therefore probably did not remain open for a prolonged period and were most likely backfilled quickly.

In Area 2, six of the seven pits had two or more loamy fills at the top of the sequence, the only exception being pit [384]. These were almost certainly deliberately dumped, perhaps

Fig. 9 Grain storage pit [201]: the excavation of the deer skeleton

to infill depressions created by the settling of earlier fills. In comparison to the lower fills, they contained relatively large quantities of small pottery fragments. The upper fills of pits [201] and [227] were particularly striking; 26 sherds were recovered from the uppermost fill of the former, whilst 30 sherds were recovered from the uppermost fill of the latter. The low mean sherd weights indicate some attrition or degradation prior to deposition, suggesting exposure to the elements, perhaps on a pre-existing rubbish heap. However, none of the loamy fills contained any bone, which would be expected if they were composed of 'common' waste taken from a mixed midden. Similar assemblages have also been found in storage pits on other sites. It has therefore been suggested that certain categories of waste were sorted or treated differently (Hill 1995, 44). Perhaps separate areas were set aside for the disposal of broken pottery and bone. If this were the case at Old Kempshott Lane, it seems to have been acceptable or desirable to mix charred material, perhaps representing cooking waste or storage pit sterilisation waste, with pottery.

A number of deposits classified as 'exceptional' were carefully and intentionally placed above the burnt fills in five of the seven pits in Area 2 (see Fig. 5) and one of the two pits in Area 1. An iron hammerhead was also unearthed in pit [219], from between the sixth and seventh of ten fills. In pit [201], nine cattle and 88 cattle-sized, partially articulated long bones, rib bones and vertebrae, probably from a single individual, were found along side an entire adult red deer carcass (Fig. 9). The remains of two immature red deer were also found in pit [227], cut into a series of partial articulations and arranged to form a layer of bone (Fig. 10). The degree of articulation, the completeness of the bones and the absence of cut marks suggest the carcass was buried whole without removal of the meat or skin. A fragmented upper rotary quern composed of Lodsworth Greensand had been placed at a fractionally higher level in pit [227]. Pit [295] contained an iron reaping hook, an iron plate or mount, an iron strip and a bone-weaving comb. In the case of pit [242], a beehive quern composed of Sarsen stone had been deliberately placed close to its base. In Area 1, two human skull fragments and several associated skeletal elements of a dog, featuring the skull, mandible and atlas, were respectively recovered from the lower and upper fills of context [384].

Fig. 10 Grain storage pit [227]: the joints of deer and cattle

Two storage pits in Area 2, contexts [192] and [288], and pit [377] in Area 1 did not contain any apparent 'exceptional' artefacts or ecofacts within their fill sequences, although a relatively large assemblage of animal bone accompanied by three potentially residual sherds of pottery came from the upper fills of the latter.

The presence of similar assemblages and contexts on other sites strongly suggests the deposition of such 'exceptional' deposits was an Iron Age social practice (Cunliffe 2002, 517–518). It has been suggested that the digging of storage pits, the placement of seed corn within, the sowing of the grain and the closure of the pits were symbolic as well as practical acts. These acts seem to have been governed by a set of beliefs forming part of a worldview present in southern England, which began around 800 BC (Haselgrove & Pope 2007, 5). Germination of the crop would have been key to social well-being and considerable investment would have been made to ensure its success. After the grain had been removed from the ground, it may have been important to make some kind of offering for its safekeeping and to encourage its germination. This would explain why certain classes of artefact or ecofact were placed within some storage pits when they were not further used. The chosen items were rare, embodied energy investment or had practical functions that linked them to potentially sacredly charged concepts. Such 'non-rational' wastage (Green 1992, 100) has been interpreted as the material manifestation of a belief system that encompassed ideas concerning the underworld, chthonic deities, fertility and replenishment of the land (*ibid,* 132, Cunliffe 2002, 518). It is probable, however, that the practitioners of these 'site maintenance practices' viewed these acts as practical, necessary aspects of the agricultural cycle, rather than illogical acts of wastage, given their particular view of the world (Brück 1999, 321). Such ideas seem common in Iron Age south central England given the number of storage pits containing similarly placed items and it would appear that the occupants of Old Kempshott Lane held them too.

Postholes

One small, undated posthole and one small pit/posthole were found in Area 1. In Area 2, two groups of postholes were unearthed. The first was found in the vicinity of Pit Group 2, the second, in the south-central portion of Area 2. In the latter case evidence of trunca-

tion of one post cut by the other suggests that a post was replaced after it began to deteriorate. A further three postholes were observed in the southwest angle of Area 2, and several isolated postholes were also found in the area. All of the latter were small, being between 0.18 m and 0.32 m in diameter, and contained silty clay that probably accumulated naturally and gradually after the posts decayed.

The ephemeral nature of the postholes makes interpretation difficult. No finds were recovered from them, making accurate dating impossible. They are Iron Age on the balance of probablility, as the bulk of archaeological activity in their vicinity appears to have taken place during this period. Few small features of this kind survive at Old Kempshott Lane, perhaps because of damage resulting from deep ploughing. Meaningful interpretation of the few that remain is therefore impossible.

Ditches

The only ditch in Area 2, context [178], was found in the southwest corner of the excavation area. It was 17 m long, 1.5 m wide and 0.5 m deep, petering out gradually at each end. Four slots were excavated across it. Each contained homogenous well-sorted, clean silty clay, which probably accumulated naturally. This suggests the ditch was left open after it fell out of use, silting up gradually.

Field systems in lowland Britain were frequently abandoned during the Iron Age transition as agricultural land division became less important, new boundaries commonly being established during the Late Iron Age to Early Roman periods (Bradley & Yates 2007, 94; Haselgrove & Pope 2007, 7). A Late Iron Age date is therefore thought most probable, as the bulk of archaeological activity in the feature's vicinity date to the Iron Age.

The Late Iron Age enclosure

Two parallel ditches, orientated northeast-southwest, and the remains of an elongated pit or short ditch were uncovered in Area 1 (Fig. 3). Ditch [346], the northernmost of these was 1.2 m wide and 0.56 m deep with a 'V' shaped profile. A similar ditch, context [338], was found to the immediate south, which was 1.14 m wide and 0.58 m deep, with a 'U' shaped profile. The two ran parallel for 43.4 m. Ditch [346] then turned sharply towards the northwest, curving gradually westwards for a further 18 m before running into the limit of excavation to the west. Both became shallower towards the northeast, where they eventually petered out. Together, the ditches formed a sub-circular enclosure at the southwestern end, 20.2 m in diameter, entered by way of an 8.6 m wide 'avenue' to the northeast. Small elongated pit [402] was situated in the centre of this entrance. It was orientated north-south, being 3.1 m long, 1.3 m wide and 0.3 m deep. The feature petered out gradually towards the south, perhaps as a result of plough damage.

Aerial photographic surveys suggest enclosures of this nature are not uncommon in the region (e.g. Palmer, 1985). Several examples have been excavated, including Micheldever Wood (Fasham 1987, 8–20), Bramdean (Perry, 1986, 39; 1974, 41), Blagden Copse (Perry 1966, 40), Owslebury (Collis, 1968, 18) and Nettlebank Copse (Cunliffe, 2004, 48). These examples are termed 'banjo enclosures' on account of their shape. Their locations, when compared to trackway systems, suggest they were linked to livestock management (Champion & Champion 1981, 40; Cunliffe 2002; Cunliffe 2004), although this interpretation may be too simplistic. Excavated examples frequently contain considerable internal structure suggestive of settlement (Fasham 1987; Champion & Champion 1981, 40; Cunliffe 2004, 48). Typically, this occupation is Middle to Late Iron Age in date, ranging between the 3rd century BC and the early Roman period (Champion & Champion 1981, 40). It has been proposed that some started life as droveways and corrals before being converted into settlements or vice versa. Alternatively, they could have fulfilled both functions simultaneously (*ibid*, 40; Cunliffe 2004, 48). For example, archaeological evidence obtained from Nettlebank Copse suggests the enclosure started life as a seasonally used cattle-pen, before being converted into a location for permanent occupation (*ibid*, 48).

The Old Kempshott Lane enclosure was initially interpreted as a 'banjo' type. However, excavation revealed several variances to the

common characteristics of this enclosure form. These discrepancies included the lack of curvature to the south end of ditch [338], its relatively rounded profile, the comparatively small width and depth of both ditches [338] and [346] and the general lack of internal features in the form of pits or standing structures. The destructive effects of modern ploughing could explain this, although one would expect a clear scatter of residual finds across the area if this were the case. Only one small ovoid pit, context [364], was found inside.

The enclosure therefore does not appear to have delineated a settlement. It may have been used in the control and management of livestock. The 'avenue' formed by the two parallel ditches could have functioned as a droveway, funnelling animals into the 'D' shaped enclosure at its south-western end, which could then have been barricaded to prevent their escape. The layer of humic rich material within the enclosure could therefore have been generated by the waste accumulation and poaching of penned animals. Whilst the shallow nature of the ditches would render them useless as a barrier against larger animals such as cattle, they may have been suitable for the management of sheep and goats, particularly if the ditches were associated with hedges.

Orientation of the entrance towards the northeast may be significant. The direction of the rising sun appears to pervade Iron Age settlement design, playing a significant part in the orientation of round houses, the thresholds of which generally faced eastwards. Although less pronounced patterns exist for enclosure entrances, they do appear to mirror this pattern (Woodward & Hughes 2007, 186). Entering an enclosure from an easterly direction may therefore have been more auspicious.

Five slots were excavated through the northern-most enclosure ditch and four through the southern-most ditch. The distribution of artefacts and ecofacts was skewed in favour of Slot 1 within ditch [346]. 31 fragments of pottery, 3 cow sized rib bones, 1 sheep sized long bone fragment and a disarticulated human neonatal humeral fragment were found in the lower fill, and 3 large pottery sherds and a fragment of quartz conglomeratic sandstone quern came from the upper fill. This contrasts starkly with the contents of the other slots, which contained one or two distinct fills of clean silty clay, largely devoid of finds. Whilst the clean silty clays are best explained as the product of natural in washing, the dumped fills in Slot 1 of ditch [346] are not.

The contents of Slot 1 suggest the enclosure fell out of use in the Late Iron Age to Early Roman period. This suggests occupation in the vicinity of the site continued unbroken from the Late Iron Age to the Early Roman period. Spatial variations of artefacts within prehistoric enclosures are common. Relatively large assemblages are sometimes deposited in certain parts of a ditch, particularly the terminals or corners. The inclusion of the neonatal human bone, the quern fragment and the relatively large pottery assemblage probably represents deposition of selected materials in a specific location. Human bone is frequently found in ditches on Iron Age sites (Woodward 1992, 82), sometimes accompanied by large weights of pottery or animal bone (Hill 1995, 78) and in the case of the latter with an apparent selection of both specific anatomies as well as species.

Iron Age communities probably viewed enclosures of this nature as symbolic as well as physical boundaries. Whilst they no doubt formed actual barriers capable of containing or constraining animals or people, they probably also performed a series of important social functions. Boundaries represent 'physical manifestations of identity' and as a result define communities, social groups (Wells 2007, 390) and activities. Their construction would have required communal effort, necessitating the gathering together of individuals. Their creation and subsequent use would have reinforced ideas about alliance, identity, inclusion and exclusion. Closure may also have been a communal event during which 'exceptional' artefact assemblages, such as large amounts of pottery, querns and human remains were deposited (Hill 1995, 76–83). Ditches may have been subject to repeated backfilling and recutting, perhaps as a way of reaffirming these social ties (*ibid*, 76–83). This may be why the D-shaped enclosure was partially re-cut during the Early Roman period.

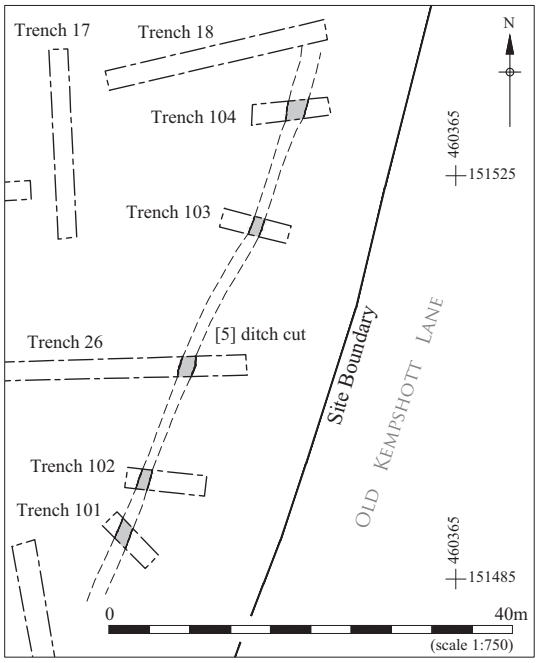

Fig. 11 The Early Roman roadside ditch

Phase 6: the Early Romano-British period

Features suggesting unbroken settlement activity between the Late Iron Age and Early Roman periods were unearthed. The focus of activity appears to have shifted towards Area1 in the southwest, as no features of Roman date were found in Area 2.

The roadside or boundary ditch

The remnants of a Roman ditch, aligned north northeast- south southwest, were uncovered in the Evaluation in Trenches 26, 101, 102, 103 and 104 on the north side of the site (Fig. 11). The ditch was approximately 43 m long, 1.75 m wide and 0.48 m deep. It either petered out or terminated towards the north and south, or changed direction before reaching Evaluation Trenches 18 and 38. The former hypothesis may be more likely, as the feature could represent a roadside or boundary ditch running parallel with the Silchester-Winchester road, thought to be situated in the approximate position of Old Kempshott Lane. The clean, fine-grained nature of the backfill found within the feature suggests it silted up naturally.

The rectangular enclosure

The eastern edge of a large rectangular enclosure was found in Area 1 (Fig. 12). It was formed by two ditches, contexts [335] and [102/380], its internal dimensions being 58 m northwest-southeast by 6 m northeast-southwest. Both ditches were approximately 1.4 m wide and 0.73 m deep with 'v' shaped profiles and had been backfilled with material containing pottery characteristic of the early Roman period. This suggested that the enclosure fell out of use at this time. The ditch continued beyond the western limit of excavation, perhaps forming a large rectangle. The frequency of Roman finds unearthed by the plough in the adjacent field (Hawkins 2006) suggests the ditches may have enclosed a Roman settlement or farmstead. A probable entranceway, 2.6 m wide, was situated in the northern corner. Old alignments were respected. The new enclosure was at a right angle to the ditches of the Late Iron Age D-shaped enclosure, which ditch [335] partially re-cut. This suggests some degree of continuity from the Middle to Late Iron Age to the Early Roman periods. The re-cutting of old boundaries may have had important social implications.

Rectangular enclosures began to emerge during the Late Iron Age and Early Roman periods (Champion & Champion 1981, 40). The example at Old Kempshott Lane therefore appears to fit in this chronology, post-dating the Late Iron Age to Early Roman backfill of the 'D'-shaped enclosure, which it truncates. Similar examples have been found at the nearby sites of Ructstalls Hill (Oliver & Applin 1978, 49) and Cowdery's Down (Millett & James 1983, 157), as well as Winnall Down (Fasham 1985, 34) and Old Down Farm (Davies *et al.* 1981 134).

Six slots were excavated through ditch [102/380] during the evaluation and subsequent excavation and [335] was excavated in its entirety. The vast majority of the material found within the enclosure's ditches appears to have been intentionally dumped, although a small amount of silty clay did accumulate in the base of [102/380], presumably as a result

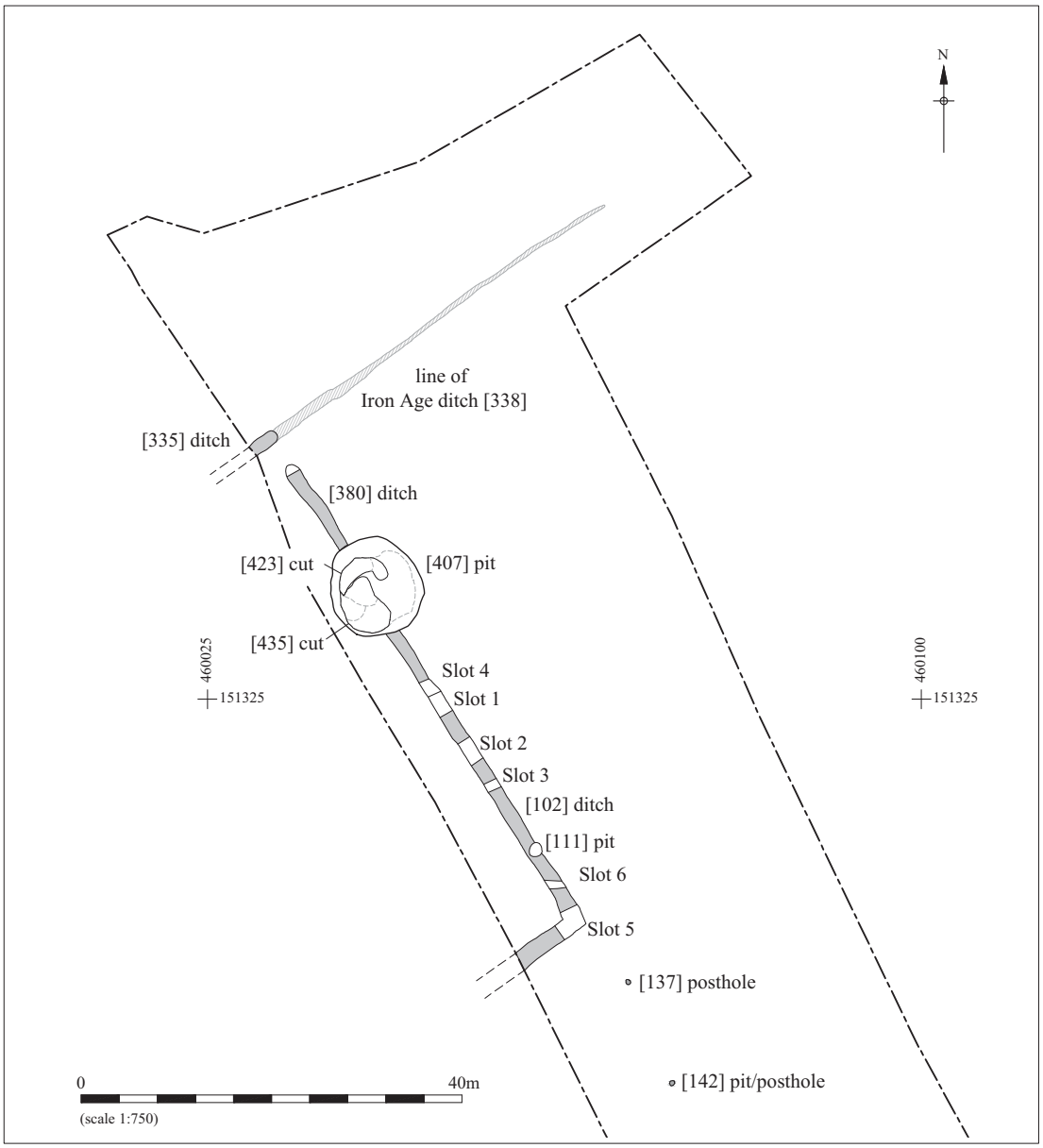

Fig. 12 Roman features in Area 1

of natural in-washing prior to closure. Early Roman ceramics produced between 43 and 110 AD were found in the upper fills, suggesting the ditches probably ceased to function at this time. The bulk of the artefact assemblage was recovered from Slot 5, located on the southeast corner of ditch [102/380] and Slot 6, located to the immediate north of Slot 5. A total of 488 sherds came from Slot 5, whilst a further 63 were found in Slot 6. This

contrasts starkly with the rest of the feature, which yielded a combined total of 14 sherds from Slots 1, 2, 3 4 and 6. Several hobnails were also recovered from Slot 5, perhaps originating from a decayed shoe, along with an ulna fragment, humeral shaft fragment, and the left femur of an approximately 37-week-old human neonate. The virtually complete remains of a second neonate, approximately 39 weeks old, were recovered from Slot 6. No human remains were found in any of the other slots, suggesting the southeast corner was selected for their disposal and that this element of the boundary had some special significance. No noteworthy patterns emerged from analysis of the faunal assemblage, the only important exception to this being the skeletal elements of an associated dog bone group, perhaps deposited as a complete, articulated skeleton, in the right terminal of the entrance to the enclosure (Slot 4), suggesting that this part of the ditch too was of some special significance.

Evidence from other sites supports the theory that such features were subject to special treatment during backfilling (Hill 1995, 80–83). The archaeological record suggests corners and termini were of particular significance, hence the occasional presence of abnormally large or unusual artefact assemblages in such locations (Woodward & Hughes 2007, 186). The neonates and pottery recovered from the southeast corner and the associated dog bone group from the right-hand ditch terminal of the enclosure's entrance constitutes a relatively common pattern. The feature's backfilling followed a wide spread Iron Age and Romano-British cultural tradition. The finds of human long bones and skull fragments in Iron Age ditches elsewhere sometimes associated with similar deer and horse anatomies and horse bones as well as the established Roman beliefs which meant that children under one year of age were not considered to be included within the social structure also fits this model.

It has been proposed that Iron Age societies classified ditches as 'spaces between' or 'non-spaces' (Hill 1995, 82), neither part of the internal settlement or external world. Ethnographic data suggests that some societies place unborn children in similar liminal categories (Douglas 1966, 96). The sex of an unborn child is not known until birth; whether or not it will survive infancy is a further uncertainty. Iron Age and Early Roman communities appear to have viewed ditches as appropriate burial places for infants (Hill 1995, 82–83) in a liminal state, hence the presence of neonates and stillborn babies in the Late Iron Age to Early Roman 'D' shaped enclosure and the Early Roman rectangular enclosure. Such an interpretation is further supported by archaeological evidence from other Iron Age and Romano-British sites in the area. At Ructstalls Hill, two infants were buried together in an Early Roman enclosure ditch, along with a third placed in a small niche cut into the terminal of the same feature (Oliver & Applin 1978, 56 & 89). Human skull fragments and infant burials were also found in an Iron Age Enclosure at Cowdery's Down (Millett & James 1983, 180) and a similar infant burial was found in an enclosure on the adjacent site of Common Plantation (Oliver & Applin 1978, 89).

Phase 7: the later Roman period

The small pit

A small Roman pit, context [111], partially truncated the northern half of the earlier rectangular enclosure ditch [102/380]. The feature contained six sherds of pottery, dating to between 100 and 400 AD. Ploughing had presumably truncated it horizontally, as it was a mere 0.07 m deep. Interpretation of the pit's function was precluded by its shallow nature and the general lack of artefactual associations.

The large pit

A much larger circular pit, context [407], truncated enclosure ditch [102/380] (Fig. 12). Its centre had been positioned immediately above the ditch. This was probably done deliberately rather than coincidentally, implying that the ditch was still recognisable as an earthwork or depression when the pit was dug. Indeed, the relationship between the upper fill of the ditch and the uppermost fill of the pit was hard to establish, suggesting the very top of the ditch may have been open at the same time as the pit. It therefore post-dates the lower fills of the rectangular enclosure, being dug sometime after the late 1st to early 2nd century AD.

The pit was substantial in size and circular in shape, with a variable diameter of 10.4 m to 9.75 m and a neatly cut, 0.3 m deep, 0.25 m wide step or 'lip' at the top. The pit was between 2.6 m and 4.4 m deep and had a very uneven, irregular base. After [407] had been created, two smaller, irregular pits, contexts [435] and [423], were cut into its base. These may have been created very shortly after the large pit, perhaps forming part of essentially the same event. Both were irregularly shaped with variable depths that ranged from 1.25 m to 0.4 m. A stratigraphic relationship between the two could not be established as they were backfilled with identical deposits, presumably lain down at the same time. The backfill of the large cut was divided into two, the lower and upper backfill sequences, separated by a hiatus in backfilling during which a cut for a grave was created. No obviously unusual artefact assemblages were found within the upper or lower fill sequences, the only 'exceptional' deposit being the human remains and grave goods in the grave cut. The bulk of the fills seem to represent sterile dumped soil or weathered material redeposited from pre-existing middens. This would explain why some Early Roman pottery was found above the 3rd to 4th century burial. It is important to note that the full significance of the feature was not recognised until the inhumation was discovered. Consequently, unlike the lower fills, the upper backfill sequence was not fully hand excavated. Instead, a 1.5 m wide sample slot was dug through the centre of it. As a result some potentially relevant deposits could have been overlooked.

The primary fills of the two smaller pits did not resemble the surrounding natural either in colour or consistency, being composed of homogenous, mid reddish-brown loam with rare to occasional inclusions of Iron Age to Early Roman pottery and animal bone. They therefore probably came from elsewhere. Further deposits of similar material were then laid down, creating a flat base, 2.2 m below the modern ground surface. Some slumping of redeposited natural chalk and clay indicative of edge collapse was recorded between the dumped fills, suggesting that some time elapsed between intentional depositional episodes. No weathering cone was present suggesting the large pit was backfilled fairly quickly and was not left open for a significant time.

A rectangular cut was subsequently excavated in the centre of the feature, truncating the lower backfill sequence and the base of the pit (Fig. 13). This was orientated northeast-southwest, was 2.2 m long, 1.3 m wide and 1.22 m deep. Excavation of the feature revealed the remains of a human skeleton, context [408], which had been buried along with a funerary vessel of late 3rd to 4th century date (Fig. 14). The skeleton was of a middle aged female. She was of slight build being 1.57 m tall, an average height for the Roman period. The majority of her teeth had been lost before death, suggesting poor dental hygiene or heavy dental wear. Skeletal analysis suggests she undertook manual work, regularly carrying heavy loads. The skeleton had been buried in a supine position, with her lower arms crossed over her lap. The only grave goods were a small New Forest indented beaker (Fig. 15.7), dated AD 270–400, which had been placed to the immediate east of her head. The skeleton itself sat on top of a thin, friable, dark-brown deposit, roughly rectangular in shape, which may represent a severely degraded wooden litter. Eleven small hobnails were also found around her feet, suggesting she had been buried in her shoes.

The grave cut was backfilled with [399], a deposit of light yellowish brown silty clay, which contained 2 sherds of Late Roman pottery and frequent inclusions of chalk. Backfilling of large circular pit [407] then resumed. This episode of backfilling post-dates the late 3rd to 4th century, as it seals the grave cut containing the indented beaker. A further nine fills were recognised, composed predominantly of mid brown silty clay and chalk, representing a combination of intentional dumping, natural in- washing and edge collapse. Occasional charcoal flecks were observed within the deposits, along with rare to occasional cattle, sheep or goat bones and rare horse bones as well as six residual Late Iron Age pottery fragments.

The excavation of such a large pit would have been a significant undertaking. It therefore seems unlikely that it was created for the sole purpose of burial of an individual. Whilst the inclusion of the burial suggests the pit was at

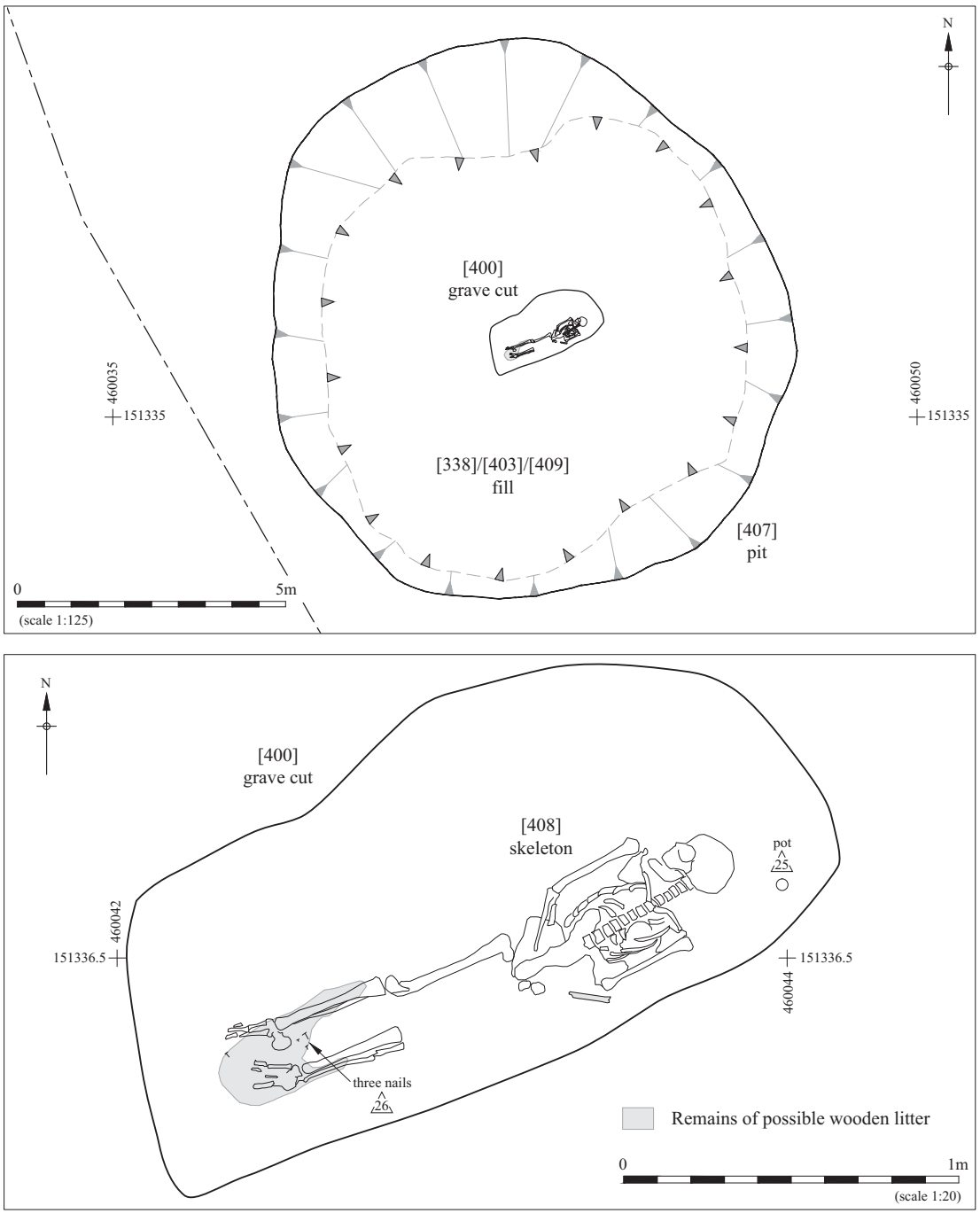

Fig. 13 Roman inhumation

Fig. 14 The grave containing the skeleton and the indented beaker

one time a special, potentially sacred place, the 'ledge' feature, the uneven floor, additional pit cuts in the base and the secondary nature of the grave suggest an earlier use or the completion of a lengthy complex procedure or process. The pit went through the natural silty clay, penetrating over 3 m into the underlying, free-draining chalk gravel. As a consequence, it did not hold water and could not have served as a well. The two cuts found in the base were suggestive of quarrying on account of their irregular nature. Chalk was required for a number of industrial processes during the Roman period, including the manufacturing of marl, lime mortar and concrete. It was also sometimes used as a building stone in the Hampshire area, often along with flint. For example, much of the core of Silchester's defensive walls was constructed from flint, held together with lime mortar, whilst some portions were composed of alternating courses of chalk and sandstone blocks (Blagg 1990, 39). Consequently, it is possible that the feature represents a chalk or flint quarry. As no seams of flint were observed in the sides of the pit and some large flint nodules were found in the backfill, chalk extraction appears more likely.

The well-finished, virtually circular top of the feature and neatly cut 'ledge' are not what one would expect of a quarry. It also seems strange and somewhat impractical that the excavators chose to mine downwards rather than outwards, given the logistical problems involved in raising the extracted materials to the surface. Whilst the sacred and profane are separated in modern western society, such a distinction may not have been present in the Iron Age and Romano-British periods (Clarke, 2000, 27). Modern ethnographic parallels of such a mindset exist, a good example being the Dinka people of Africa; 'since the major contexts of their experience overlap and interpenetrate, nearly all their experience is religious' (Douglas 1966, 69). It is therefore possible that the Romano-British population of Old Kempshott Lane viewed the process of quarrying in a very different way to us. Such a mindset may have influenced the entire act, from the choice of location immediately above the earlier boundary ditch to the final shape and size of the pit and its subsequent re-use as a grave.

Roman and Iron Age shafts, pits and wells containing probable votive offerings including human, animal and material remains, have been found throughout Britain and the wider on the continent in France, Germany, the Low Countries and Scandinavia. Some Romano-British examples may have been specifically created for the purpose of burying votive remains, such as those unearthed at Folly Lane, Verulamium (Fulford 2001, 210), whilst most appear to represent reused features like wells. Well-known Roman examples include the fort of Newstead in Scotland (Clarke 2000, 22 & 24) and Luxembourg Gardens in Paris (Green 2002, 129). In southern Britain, similar features have been found at Baldock in Hertfordshire, (Fulford 2001, 208), Portchester (*ibid*, 211–212) Roman Southwark (*ibid,* 207;

Beasley 2006), Muntham Court, Sussex, Asthall, Oxfordshire, and Ewell, Surrey (Woodward & Woodward 2004, 77). Numerous other British examples have been catalogued by Ross (1968, 251–75).

Analogies in the Basingstoke region are few. At Winnall Down near Winchester, five Middle Iron Age crouched burials consisting of one adult female, two children and at least two infants were found in a series of intercutting, shallow chalk quarry pits (Fasham 1985, 25, 27). Although they are considerably earlier than the Old Kempshott Lane skeleton, they do suggest quarries were appropriate places for inhumations. The most striking local example comes from the nearby site of Oakridge, where a 26.67 m deep well was sunk in the 1st century AD (Oliver *et al.* 1992, 72–74). Numerous complete or almost complete pots were dumped in the feature (*ibid*, 75), along with some metal objects (*ibid,* 77–79), quern stones (*ibid*, 79) and an interesting assemblage of animal and human bone, including complete animal carcasses and the disarticulated, co-mingled remains of a minimum of 24 adult humans and 3 children (*ibid,* 75–76). The assemblage was interpreted as rubbish mixed with the human and animal victims of a plague such as anthrax (*ibid*, 92). In light of the results of the Old Kempshott Lane excavation and the body of evidence from Britain and the continent, this evidence needs to be reassessed. The contents resemble votive deposits found in numerous similar Roman and Iron Age contexts (Ross 1968, 251–75) and it therefore seems likely that the Oakridge well was backfilled with a series of offerings after it fell out of use.

Deposits in intrusive features of this nature 'vividly recall' patterns of structured deposition prevalent in the Iron Age and earlier (Fulford 2001, 215). They represent the continuation of a prehistoric tradition in which objects, animals or individuals were deposited deep underground in shafts, pits and wells, perhaps as 'a reciprocal contribution to the earth's fertility' (Green 2002, 129) or to a chthonic deity. Reciprocity may have been required whenever useful materials were extracted from the earth, be they seed corn, water or raw materials. In this context, a quarry pit becomes a logical place for a burial.

At Old Kempshott Lane, the location of the quarry pit, immediately above the rectangular enclosure ditch, is considered significant. It was deliberately positioned over this boundary, representing liminal space after the ditch was backfilled for the last time. The inclusion of the skeleton within the feature may represent a 'leave-taking deposit' (Brück 2007, 29) laid down after the enclosure and quarry, or perhaps even the settlement, fell out of use. More evidence of Later Roman activity may be present in the field to the west. This interpretation is supported by the fact that the 3rd to 4th century burial represents the latest phase of activity within the excavation area. This is notably paralleled at several local sites where deeply intrusive features truncated earlier boundary ditches backfilled in the late 2nd to 4th centuries AD. The well at Oakridge partially truncated an enclosure that had been deliberately in-filled during the early Roman period. The feature also represented virtually the only 3rd to 4th century activity on the site (Oliver *et al.* 1992, 70–71). At Viables Farm, a well truncated the eastern terminal of an earlier enclosure (Millett & Russell 1984, 54). Similar features containing votive deposits have been found in several urban Romano-British contexts close to key focal points like enclosures, roads and cross-roads. Examples include Greyhound Yard in Dorchester (Woodward & Woodward 2004, 70–77), Castle Hill, Cambridge (*ibid*, 80) and Verulamium (*ibid*, 81), and Swan Street in Southwark (Beasley 2006).

Whilst these examples are not perfect analogies for the Old Kempshott Lane quarry, they do suggest a link between 'exceptional' deposits within deeply intrusive features and pre-existing boundaries. As discussed previously, ditches and boundaries had symbolic as well as physical functions in the Iron Age and Romano-British periods, perhaps representing liminal areas. The deposition of foundation burials and closing deposits will have been important aspects when boundaries were established or fell out of use. The Old Kempshott Lane quarry and the Oakridge well therefore form part of such a tradition.

The Old Kempshott Lane quarry differs from previously known 'ritual shafts', being

wider than the above examples and on the shallow side. The lack of any 'exceptional' deposits other than the burial itself is another apparent difference, although some may have been missed as the upper backfill sequence was not fully hand excavated. No directly comparable examples of supine burials within carefully constructed grave cuts with grave goods attributable to an individual are known to the author. Instead, human skeletons were generally either crouched, placed between fills in the bases of features, consisted of disarticulated bones biased towards limbs and skulls in particular, or were deposited in an inverted position as at Swan Street (Beasley 2006). The skeleton at Old Kempshott Lane therefore seems to represent a new variant of an essentially Roman burial in a native British context. This suggests fusion of Roman and indigenous beliefs and burial practices.

THE IRON AGE AND ROMANO-BRITISH POTTERY by James Gerrard

The excavations produced a small assemblage of Iron Age and Romano-British pottery. The Iron Age pottery fabrics could be easily paralleled by those identified at the nearby site of Brighton Hill South (Hatch Warren) (Rees 1995) and when quantified accounted for 652 sherds (4.619 kg) the analysis guided by the work of Rees. The remainder of the assemblage (800 sherds, 12.182 kg) mainly comprised of Late Iron Age/Early Roman wares in the Alice Holt/Surrey tradition (Lyne & Jefferies 1979) alongside other local products and the occasional import. A full catalogue of the material and a copy of the assessment report (Gerrard 2007) are held in the site excavation archive.

The Iron Age pottery

Four broad fabrics were identified and correspond to Rees' (1995, 35) Fabrics 1–4:

Fabric 1: handmade; fairly soft, variable colour; abundant flint (506 sherds, 3821 g)
Fabric 2: handmade; fairly soft, variable colour; abundant quartz sand (46 sherds, 347 g)
Fabric 3: handmade; virtually inclusion-free, poorly mixed; sparse iron ore, occasional organic material and very fine quartz, the latter giving a slightly sandy texture (23 sherds, 129 g)
Fabric 4: handmade; fairly soft, variable colour; abundant fine-coarse quartz sand and moderate-common flint (73 sherds, 276 g)

The majority of the Iron Age pottery was recovered from cut features such as ditch and pit fills. In many cases individual pottery groups from specific features contained no diagnostic sherds and the sherds were of a small size and abraded. Few groups can be dated to a period within the Iron Age with precision and the site chronology has been based on the principle espoused at Brighton Hill South (Rees 1995, Fig. 23) and Danebury (Cunliffe 1984, Fig. 6.3) that flint tempered fabrics became more common from the Middle Iron Age onwards, with sand tempered fabrics being characteristic of the earlier Iron Age. The few diagnostic sherds are of forms that support this broad ceramic phasing.

The main interpretative issue relating to the Iron Age pottery concerns its role in the supposed structured deposits within individual features. The main difficulty here lies in discriminating between the disposal of 'fresh' rubbish and the placing of vessels or parts of vessels in pits in highly symbolic and structured acts. At this site it is not possible to establish whether the grain storage pits were filled with structured deposits from the pottery alone. However, it is noticeable that pits [132], [192], [201], [242], [264] and [295] all produced significant groups of pottery (Figs 15.1–3). The character of these varied. Pits [132] and [264] both contained fresh fragments from single vessels but pit [192] had fragments from at least four vessels. This suggests that we are looking at rubbish disposal or a type of ritual that fluctuated depending on the season or group making the offering.

Illustrated sherds

Fig. 15.1 Saucepan pot, Fabric 4, from Middle Iron Age fill [18] of pit [192]
Fig. 15.2 Saucepan pot, Fabric 1, from

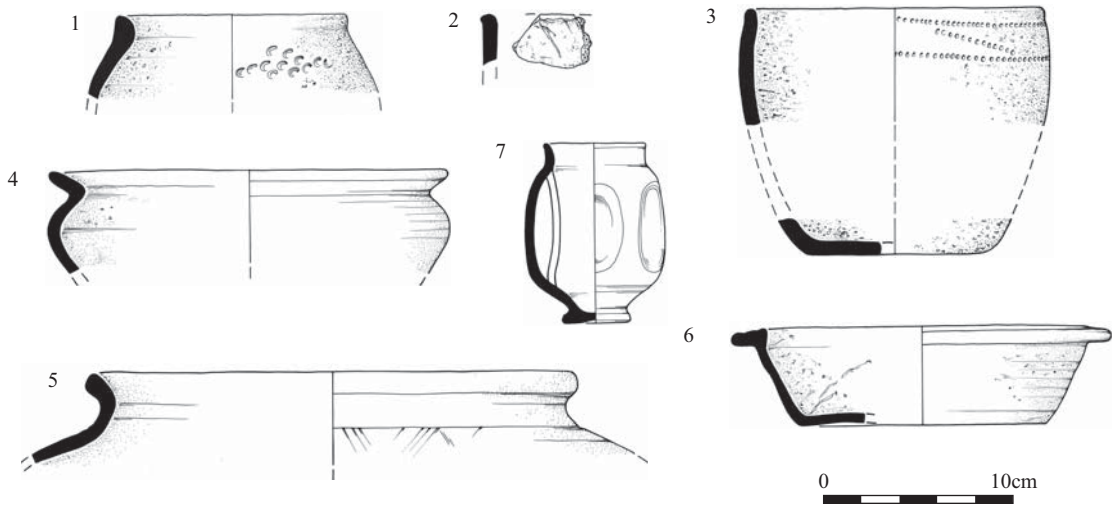

Fig. 15 Iron Age and Roman pottery

Middle-Late Iron Age fill [292] of pit [295]

Fig. 15.3 Saucepan pot with two bands of stabbed decoration, from Middle-Late Iron Age fill [258] of pit [242]

The Late Iron Age and Romano-British pottery

The bulk of the Late Iron Age pottery is closely allied to the Alice Holt/Surrey pottery defined by Lyne & Jefferies (1979; Tomber & Dore 1998). Pottery continued to be manufactured in this tradition during the early Roman period and as a result he latest Iron Age and Romano-British pottery are considered jointly.

Fabrics

Some 800 sherds (12.182 kg) of Late Iron Age and Early Roman pottery were recorded and where possible fabrics were identified using the national system established by Tomber & Dore (1998). These fabrics include a number of imported wares and are quantified in Table 1.

Other fabrics were described individually and given unique, site-specific codes. Descriptions of these fabrics are given below. Three sand-tempered fabrics (Fabrics S1-S3) are probably local variants of the Alice Holt tradition (M Lyne *pers. comm.*) and the less common fine grog-tempered wares (G1-G3 and SG1) can be paralleled in the early groups at Silchester (Fulford & Timby 2000).

S1: Hard, black with brownish black external surfaces. Wheel thrown, with wiped/smoothed external surface. Frequent poorly sorted sub-angular 'milky' quartz <1 mm, occasional sub-angular colourless quartz <0.5 mm and occasional white quartz <0.5 mm. Reminiscent of BB1 (9 sherds, 150 g)

S2: Hard, grey with white margins and brownish grey external surfaces. ?Hand made, with harsh surfaces that is a product of visible and frequent clear sub-angular quartz <1 mm. In a fresh break there is less quartz visible than in the surface. Occasional–moderate poorly sorted sub-angular colourless quartz <1 mm, occasional voids/splits <1 mm. Possibly an Alice Holt product? (56 sherds, 790 g)

S3: Hard, dark grey wheel thrown with hackly fracture and smoothed external surfaces. Occasional poorly sorted sub-angular colourless quartz <1 mm and frequent well sorted colourless quartz <0.5 mm. Possibly an Alice Holt product? (66 sherds, 1347 g)

G1: Soft, handmade light pinkish orange with hackly fracture and wiped external surface. Frequent well sorted rounded–angular red grog <2 mm. Similar sized and shaped voids in surface. (43 sherds 1479 g)

G2: Soft, ?handmade fine light grey with smooth orange surfaces with a fine fracture. Occasional poorly sorted rounded red grog <2 mm and occasional well sorted mica flecks <0.5 mm (17 sherds, 319 g)

G3: Soft, wheel-thrown fine light grey with dark grey surfaces and fine fracture. Occasional well sorted grey/black rounded grog <0.5 mm (18 sherds, 177 g)

SG1: Hard, wheel thrown grey with brownish grey wiped external surfaces and fine fracture. Frequent sub-angular quartz <1 mm, occasional rounded grog <3 mm, especially prominent in the surface. (5 sherds, 142 g)

Discussion

The Late Iron Age and Early Roman assemblages are dominated by necked jars and bowls decorated with cordons and a variety of burnished motifs (Figs 17.4–5). Large storage jars and the occasional dish (Fig. 15.6) are also present but forms often associated with more 'Romanised' assemblages (like flagons or mortaria) are lacking. This suggests that ceramic material culture continued to be used in an indigenous manner and indicates that the Roman Conquest did not bring with it profound and substantial social changes. That said, the inhabitants of the site were brought into contact with the wider Roman world. The presence of small quantities of samian, Spanish amphorae and pottery from the Verulamium region and Dorset indicates connections with long-distance exchange networks.

It is significant that little of the pottery can be dated to later than the early second century at the latest. In fact most of the activity appears to be of first-century date with a few sherds (particularly the Dorset BB1) indicating that life continued after *c* AD 110/120. This indicates that whatever caused this site to flourish during the Iron Age and the first few decades of the Roman period ceased to be of consequence and led to the end of intensive activity by the mid-second century. Late Roman pottery was almost completely absent from the site. The exceptions were a sherd of an Alice Holt / Farnham ware storage jar (Lyne & Jefferies 1979) of post-AD 250 date from fill [434] of cut [423] and a small and complete New Forest Colour Coated beaker of Fulford's (1975) Type 27 dated AD 270–400 that accompanied burial [400] (Fig. 15.7). The beaker's small size is noticeable as miniature vessels are often a feature of temple sites and this may have made it a 'suitable' object to accompany the inhumation.

Illustrated sherds

Fig. 15.4 Small necked bowl, ALH RE, LIA–Early Roman, from fill [165] of Roman boundary ditch [102]

Fig. 15.5 Necked jar with cordon, ALH RE, LIA–Early Roman, from fill [165] of Roman boundary ditch [102]

Fig. 15.6 Reeded rim bowl, Fabric G1, 1st to early 2nd century, from fill [165] of Roman boundary ditch [102]

Fig. 15.7 Small New Forest Colour Coated beaker, Fulford (1975) Type 27, dated AD 270–400, from late Roman grave [400]

THE IRON AGE LOOM WEIGHT
by James Gerrard

A large fragment of a triangular weight (small find <12>) was recovered from fill [155] (Fig. 16.1). It was manufactured from a coarse flint tempered fabric similar to pottery fabric 1. The form of the object is typically Iron Age (Poole 1984) and these forms are usually assumed to have functioned as loomweights. However, other possible functions, including thatch or door weights, exist (Poole 1984, 406).

THE SMALL FINDS *by* James Gerrard

A small number (17) of Iron Age and Roman small finds was recovered from the excavations. All but one of these was made from iron and in general the state of preservation was poor, which has rendered the identification of object's original function frequently difficult. Nevertheless, given the group's small size and state of preservation there remain a number of significant items that can aid in the interpretation of the site.

Iron Age grain storage pit [295] produced a

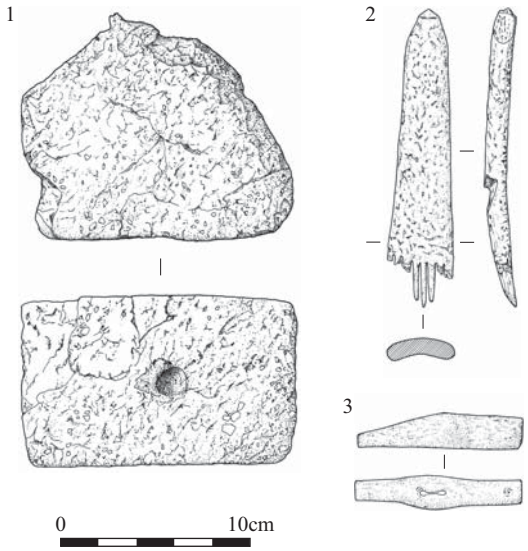

Fig. 16
1 Iron Age loom weight <12>, from pit [156]
2 Iron Age bone or antler weaving comb <22>
3 Iron Age hammerhead <14>

number of small finds from its lowest fill [294]. These included: a small and broken iron rod or bar <23> ,a large and poorly preserved piece of iron sheet that may be a mount <17> a socketed reaping hook <16> and a bone or antler weaving comb <22> (Fig. 16.2). The reaping hook is of a well-known Iron Age type (for instance Barrett *et al.* 2000, Fig. 38) and a similar example was recovered from excavations at Brighton Hill South (Keevil 1995, 33). The weaving comb is largely intact, undecorated and has a tapered butt. In general such items are difficult to date with precision but at Danebury this was an uncommon Late Iron Age form (Cunliffe & Poole 1991, 257).

Grain storage pit [219] also produced a noteworthy Iron Age find from one of its upper fills [170]: a hammerhead <14> (Fig. 16.3). It is from a small, curved hand hammer and has a square face and straight pane (Fell 1998, Fig. 5). It is similar to an example from a first century BC grave at Rudston in East Yorkshire (Fell 1998, Fig. 3.15). Iron Age hammers are comparatively rare with excavations at Danebury yielding only a single example (Cunliffe & Poole 1991, 351).

The Iron Age finds suggest a site with an economy that featured both agricultural activity and small-scale craft working. The finds are comparable to those from the nearby site excavated at Brighton Hill South (Keevil 1995) and provide further insights into the Iron Age economic regimes that operated in the area.

The Roman phases yielded few small finds of note and there are no personal adornments like brooches or hairpins that tend to characterise Romano-British small finds assemblages. However, groups of hobnails were present in the fills of ditches [22] and [30] and this probably indicates the disposal of refuse (including worn out shoes) and thus suggests nearby settlement activity. Hobnails <26> also accompanied burial [399] and their recovery from the feet area shows that the individual was buried with shoes. This is a common feature of Romano-British burial rites.

THE ANIMAL BONE by Kevin Rielly

This rural site provided a moderate quantity of animal bones from two out of the three large areas excavated, and the evaluation trenches. Approximately equal amounts were recovered from Areas 1 and 2 (see Table 2), with the former mainly provided by deposits dating to the Iron Age, early Roman and Roman periods, while the Area 2 bones were all taken from mid to late Iron Age levels. Bones were also recovered from 4 evaluation trenches, with the majority raised from a feature in Trench 66. The same feature was later revealed in Area 1 (see below).

The bones from these deposits have all suffered mechanical damage, a vast array of fresh breakages and in addition, all bones have suffered to some degree from root etching. Most are only mildly affected, but severe damage was noticed on some. This damage affected the preservation of cut marks and, when severe, on the potential for identification. Preservation factors undoubtedly impacted the recovery of the bone. A number of bulk samples were taken from this site, but only three of these provided bone fragments.

Table 2 Distribution of hand collected bones by phase, area and feature using total number of fragments (T1) and total number following refitting (T2), with percentage decrease (%D) equal to 100 – (T2/T1 × 100). Area divided into evaluation (E) and main trenches (1 and 2). S.pit equals large storage pit.

Phase	*3*		*4*		*6*		*7*	
Quantity	*T1/T2*	*%D*	*T1/T2*	*%D*	*T1/T2*	*%D*	*T1/T2*	*%D*
Feature/Area								
S.pit 19(E)			1/1	0				
Ditch 22(E)					185/123	33.5		
Ditch 30(E)					60/19	68.3		
Ditch 56(E)					35/9	74.3		
Ditch 102(1)					401/214	46.7		
Pit 119(1)			1/1	0				
Pit 156(2)			7/1	85.7				
S.pit 201(2)			361/278	23.0				
Dump 209(2)			1/1	0.0				
S.pit 219(2)			15/2	86.7				
S.pit 227(2)			285/195	31.5				
Pit 264(2)			20/1	95				
S.pit 288(2)			22/4	81.8				
Ditch 338(1)					80/10	87.5		
Ditch 346(1)	20/4	80						
Pit 368(1)	15/2	86.7						
S.pit 377(1)	13/10	23.0						
S.pit 384(1)	125/46	63.2						
Grave 400(1)							8/6	25
Pit 407(1)							133/97	27.1
Pit 423(1)							279/147	47.3
Total	173/62	64.2	713/484	32.1	761/375	49.3	420/250	40.5

The samples were washed through a 1 mm mesh and the sieved and hand collected bones were recorded using standard methods, with the tooth eruption/wear uses the method devised by Grant (1975 and 1982), and measurements taken from von den Driesch (1976). Approximate ages for the tooth eruption and epiphyses fusion sequences are taken from Schmid (1972, 75 and 77) and Amorosi (1989, 98 and 99). Recording was essentially limited to those bones that could be identified to species, excluding most vertebrae and ribs, although notes were taken of the presence of such parts if associated with a partial or complete skeleton.

As a measure of the degree of fragmentation, the various context assemblages were quantified in total number of bone fragments as well as the total number following attempts

Table 3 Count of refitted animal bones in each occupation phase including hand collected and sieved fragments (in brackets)

Phase	*3*	*4*	*6*	*7*
Species				
Cattle	17	15	114(5)	76(3)
Cattle-size	21	91	106	137(16)
Horse	6		11	14
Red deer		372(1)	1	
Sheep/Goat	3	2	10	6
Sheep	1		1	5
Sheep-size	5		5	8
Pig	3			1
Dog	6		125	5
Cat				1
Small rodent		1(1)		(1)
Common shrew		(1)		
Small mammal			2	
Chicken			(1)	
Amphibian		3		
Grand total	62	484(3)	375(6)	253(20)

made to refit as many bones as possible. Table 2 shows the total numbers found in the feature assemblages (amalgamating fill collections from the same features) as well as the percentage decrease in the quantity of bones following refitting. Thus, the greater the percentage decrease the greater the degree of fragmentation. There are notable variations in fragmentation throughout these deposits but there does appear to be a generally greater level of damage amongst the features containing the earliest Iron Age pottery assemblages compared to those dating to the later Iron Age and Roman periods. The Phase 4 collection appears to be the least fragmented, which is clearly related to the dominance of articulated and semi-articulated animal skeletons from pits [201] and [227] (see below).

Table 3 shows the range and relative abundance of the various species identified in each phase assemblage. The counts refer to the refitted totals, i.e. T2 (as described above and shown in Table 2). The various totals mentioned in the report also refer to T2 rather than T1 counts. Each of the phased assemblages (Table 3) comprises a large proportion of cattle-size bones. This is not necessarily a result of the noted levels of fragmentation, as these include a large quantity of rib and vertebra fragments. It can be assumed that these assemblages do not contain the full range of species that were either exploited or present at this site, as the noted levels of preservation indicate a high degree of mechanical damage, which will have biased the recovery of the smaller species. The 3 bulk-sample assemblages (mentioned above) are all rather small (see Table 3 and below) and the smaller species are limited to a very few

Table 4 Percentage distribution of cattle- and sheep-size fragments in phases 3, 6 and 7, using refitted (T2) counts

Phase	*3*		*6*		*7*	
Species and size category	*N*	*%*	*N*	*%*	*N*	*%*
Cattle, Horse, Cattle-size	42	77.8	231	93.5	227	91.9
Sheep/Goat, Sheep, Pig and Sheep-size	12	12.2	16	6.5	20	8.1

bird, shrew and small rodent bones. Surprisingly, the few amphibian bones were recovered by hand.

Description of the assemblage

Phases 3 and 4: Early/Middle to Middle/Late Iron Age

The Iron Age levels featured a number of large storage pits which provided the majority of the bones from Phase 3. Most were from pits [384] and [377], with a combined total of 55 bones, the remainder arising from a smaller pit [368]. Most were cattle or cattle-size (see Table 3), these forming 77.8% of the phase assemblage. This earlier phase demonstrates the highest level of fragmentation (see above) and it is surprising that it also shows the lowest proportion of cattle and cattle-size bones (see Table 4). Assuming that the greater the damage the greater the relative recovery of cattle as against sheep-sized bones, this evidence could suggest an increase in cattle at the expense of sheep by the early Roman period. The cattle are represented by a general mix of skeletal parts and almost exclusively by 3rd or 4th year animals (see Table 7). The few sheep and pig bones were mainly from [384] and these may represent the partial remains of two juveniles. There is a remarkable lack of bones with butchery marks, possibly related to the less than perfect state of preservation. Just one butchered cattle bone is represented, a skull fragment with a series of knife marks mid frontal. There is one other example, also with knife cuts, adjacent to the articular process of a horse mandible, from [384], no doubt related to removal of the jaw from the skull and clearly indicative of meat use. The other horse bones from this pit fill include a mandible, a femur, a tibia and a metatarsus, all probably from the same adult individual. This may also include a few cattle-size vertebrae, all of which are fused, suggesting an age in excess of 4 to 5 years. Finally, this deposit also provided a partial articulation of a dog, featuring the skull, mandibles and atlas, all from an adult individual. The length of the mandibular first molar at 24.3 mm is towards the upper end of the range of such measurements from Iron Age dogs from Britain (18 to 25.6 mm with a mean of 22.4 mm, taken from Harcourt 1974, 163).

Phase 4: Middle to Late Iron Age

A large proportion of the Phase 4 assemblage, with 480 bones, came from the storage pits, and in particular from [201] and [227], in Pit Group 1 in Area 2, with 278 and 195 fragments respectively. The bones from [227] and the vast majority from [201] were identified as red deer, comprising the relatively complete remains of two immature individuals (Skeletons 1 and 2) and one adult individual respectively. The latter assemblage also included a few cattle limb bones accompanying a large number of cattle-size vertebrae and rib fragments (see Table 5). All of these bones were found within or at the top of the primary fills. The field notes as well as the *in-situ* photographs (Figs 9 & 10) of these two bone groups, clearly show that the [201] deer was fully articulated when recovered, while the [227] examples were represented by a series of partial articulations. These include leg articulations, as well as an antlered skull with several neck vertebrae, showing that at least one of the animals was male (Skeleton 1). The

Table 5 Description of red deer and cattle remains from Phase 4 pits [201] and [226]. N is the number of bones and in Age, mandibular tooth wear stage (ws) 'c', 'E' etc follows the diagrams shown for sheep in Grant (1975; 1982). For explanation of other abbreviations see text.

Pit	*Species*	*N*	*Description*	*Age*
201	Red deer	177	All parts except carpals	Teeth almost full wear (mandibular M3 ws 'f'); all epiphyses are fused
	Cattle	9	Axis, scapula, pelvis, sacrum, tibia, calcaneus, tarsal, 1st and 2nd phalanges	All epiphyses fused
	Cattle-size	88	Vertebrae – a selection from all three sections plus 75 rib fragments	All vertebrae epiphyses fused
227	Red deer			
	– skel 1	23	All parts except patella, astragalus and left metatarsus. Skull with antlers.	Subadult M1 to M3 (ws 'c', 'b', 'V'); only early epiphyses fused
	– skel 2	23	All parts except axis, left ulna, patella and astragalus	Subadult M1 to M3 (ws 'c', 'c', 'E'); only early epiphyses fused
	– skel 1/2	153	Vertebrae from all sections, 105 ribs, 2 phalanges and a selection of limb bone fragments	Vertebrae all with unfused epiphyses

skull from Skeleton 2 is insufficiently complete (limited to the nuchal area) to suggest its sex. In contrast, most of the [201] deer skull was present, although in a fragmented state. The absence of antler pieces suggests it was female, but this cannot be confirmed. Both Skeletons 1 and 2 are from immature individuals, as shown by their position in the sequence of epiphyseal fusion (between the early and intermediate groups) and also by the tooth wear and eruption evidence (slight wear on the first two adult molars and third molar unerupted). However, skeleton 1 is slightly younger (as shown by the toothwear, see Table 5, and also the unfused femur trochanter minor) than Skeleton 2 and, and noticeably, somewhat smaller (see Table 6).

It can be postulated that the [201] deer remains represent the remains of an entire animal, which had been dumped into the pit and deliberately buried. The [227] deer bones could represent the remains of rotted carcasses, the relatively complete state of the separate articulations perhaps suggesting that their carcasses were moved at an early stage of the rotting process. It is notable that the bones of Skeleton 1 are somewhat better preserved compared to those from Skeleton 2, suggestive perhaps of different levels of exposure to the elements. Alternatively, these carcasses may have been deliberately dismembered; perhaps as an aid to burial i.e. cutting the bodies up to best fill the available space. It is unlikely, in all these examples (cattle and deer) that any use was made of their meat or their skins. This is related to the level(s) of articulation, the completeness of the bones and the absence of cut marks.

The cattle and cattle-size bones from [201] (see Table 5) are essentially limited to the axial skeleton (vertebrae and ribs with one scapula and one pelvis) alongside a few lower limb elements, including a complete tibia, some tarsals and phalanges. All of these bones may represent just one adult individual aged at least 7 to 9 years (fusion of the vertebrae) and *c* 1049.5 mm at the shoulder (extrapolated from the length of the tibia, see Table

Table 6 Size of cattle and red deer in Phase 4 pits [201] and [227], and dog from Phase 6 ditch [22]. GL is greatest length, Bd is breadth at the distal end, P and D are proximal and distal respectively.

Feature	*Species*	*Bone*	*M'ment*	*(mm)*
201	Red deer	Humerus, femur, metatarsus	GL	262.2, 314, 295.6
	Cattle	Tibia	GL	304.2
227	Red deer			
	– skel 1	Radius, metacarpus	P to D diaphysis	277, 253
	– skel 2	Radius, metacarpus	P to D diaphysis	236, 227
22	Dog	Humerus, radius, femur, tibia	GL	119, 110.2, 128.4, 121.7
		Humerus, tibia	Bd	28.8, 20.2
102	Dog	Humerus, tibia	Bd	26.4, 18.2

6). In comparison with the red deer remains, the absence of butchery marks and the completeness of certain parts (as the scapula and the tibia), suggests some special usage of this carcass. Unlike the red deer, there are notable absences, here including most of the leg bones. Dismemberment may have occurred by scavengers, although it is difficult to understand, in this case, how various lower limb parts remained. Following the argument given for red deer dismemberment, these collections may represent the deposition of a series of partial articulations.

There was a wide and rather sparse distribution of animal bones amongst the other Phase 4 features, each comprising no more than 4 fragments (see Table 2), with cattle and cattle-size bones predominant. Species other than the major domesticates were limited to the deer and cattle pit [201], which provided a few amphibian bones common shrew (a mandible) and small rodent (mouse or vole) bones.

Phase 6: Early Roman

The Phase 6 bones all came from ditches in Area 1. The greater part was provided by the boundary ditch [102] (including ditch [22] and [30] from evaluation trenches 66 and 73 respectively), and the remainder from boundary ditches, [56] and [335], the latter being a recut of a banjo enclosure ditch [338]. These dated between the mid 1st and the mid 2nd century. Cattle is the dominant food species throughout these deposits, represented by a mix of skeletal parts belonging to at least 7 adult individuals, the majority aged at least 3.5 to 4 years (see Table 7). There were a few bones from young calves. A large proportion of the cattle bones are relatively complete, which could point to non-usage except for the state of disarticulation and the presence of some butchery. Defleshing marks were noticed on a scapula and two humeri, a dismemberment cut on another scapula and a probable skinning mark on a metatarsus. A selection of cattle bones was measurable (see Table 8) and these clearly show that the Kempshott Early Roman cattle were somewhat on the large size but within the range of sizes for Roman cattle within this general area, including London.

Dog provided the other major contribution, the 125 fragments almost entirely derived from 2 adult animals, a relatively complete male skeleton from ditch [22] and a partial articulation from ditch [102]. The former is from a short animal with an average height of 376.6 mm (calculated using Harcourt 1974). The second was more gracile with a height (calculated from a 75% complete tibia) of approximately 410 mm. The remaining species, again mainly from [102], include quantities of horse and sheep, a single red deer scapula and a chicken

Table 7 Distribution of cattle age groups in the Iron Age and Roman phases, using the following groups: -

Juvenile – the number of bones identified by the porosity, state of epiphyseal fusion and/or the stage reached in the tooth eruption sequence;
Early – fusion of the P scapula, D humerus, P radius and pelvis acetabulum;
Intermediate – fusion of the D tibia and D metapodial:
Late – fusion of the P humerus, P ulna, D radius, P and D femur, P tibia and P calcaneus,
Ages of fusion (from Schmid 1972, 75) are Early – 0.5 to 1.5 years, Intermediate and Late – 3.5 to 4 years.
Juvenile represents older calves i.e. not neonates or infants, probably aged between 0.5 and 1 year.
Key: P is proximal and D is distal. F and UF are the number of fused and unfused epiphyses respectively.

Phase	*Juvenile*	*Early*		*Intermediate*		*Late*	
		F	*UF*	*F*	*UF*	*F*	*UF*
3		3	0	4	0	1	4
6	5	22	0	15	0	14	5
7	1	19	0	6	1	1	11

Table 8 Size of cattle based on shoulder heights, using calculations from von den Driesch and Boessneck (1974), with data from 20–30 Gresham Street, London, taken from Rielly (forthcoming).

Site	*Phase/Date*	*N*	*Heights*	*Mean*
Kempshott Lane	6	5	1184.0–1251.1	1217.9
	7	2	953.3–1175.8	1064.5
20–30 Gresham Street	1/2 cent.	22	882.6–1527.6	1110.5
	3/4 cent.	17	1177.3–1045.5	1177.3

humerus, all from adult individuals. There is a notably low level of fragmentation amongst the horse bones, similar to that described for cattle, and one of the sheep bones, a radius, is rather large and could belong to a ram.

Phase 7: Roman
Animal bones recovered from various fills associated with a large circular shaft [407], which also contained a human skeleton found within a grave cut through one of the central fills. The animal bones, in order of deposition, going from the latest to the earliest, include [423], [425] [400] and a selection of the upper fills. While this feature post-dates the Phase 6 boundary ditch, the lowest fills, from [423], suggest a contemporaneity with the earlier ditch fills. The human burial clearly dates to the 3rd/4th century, which suggests that the upper fills, at the least, are late Roman.

The fills of [423] had 151 bones with the upper fills containing 96 bones (59 taken from [396], directly over the grave backfill [399]). Cattle and cattle-size bones are dominant, the former represented by a wide distribution of skeletal parts. The age of the cattle is similar to that described for the previous phase with a wealth of adults. This phase witnessed a greater cull of young adults, that is 3rd and 4th year animals (see Table 7). There are very few

cattle bones with butchery cuts, limited to knife marks on three mandibles and one radius, representing a mixture of jointing and defleshing cuts.

Horse is the best represented amongst the remainder of the Phase 7 assemblage, in particular in the upper fills, accounting for 13 out of the total number of 14 bones. All are from adult individuals. Dog and sheep/goat as well as single cat and pig fragments were found in the two uppermost fills ([390] and [389]). A single small rodent bone came from the upper fill [396].

It has been suggested that this feature may have had some ritual significance, apart from the inclusion of a burial. There is no clear indication of such from the animal bone, as demonstrated by the rather mundane nature of the assemblage, which included a dog femur, a few cattle limb bone and cattle-size fragments.

Discussion

While there is some surface damage (root etching), the major preservation factor is the extensive breakage that occurred during the recovery of the bones. The good representation of cattle and cattle-size fragments throughout these collections, and the red deer dominated Phase 4 pits (see below), is undoubtedly related to this mechanical damage. Knowing the fragmentation levels within each phase, it is possible to derive information regarding relative change. The earliest Iron Age collection (Phase 3) provided the highest proportion of sheep and sheep-size fragments while suffering the greatest level of breakage. Thus, there was a probable increase in cattle usage by the early Roman period (Phase 6). This conclusion is tempered by the small quantity of bones from this phase. The somewhat larger bone assemblage from the nearby site at Brighton Hill South showed a similar increase however between the early Iron Age and late Iron Age/Early Roman phases (Maltby 1995, 56). The proportions of cattle to sheep/goat from the collections at this site varied between sheep dominance and cattle/sheep parity, which is a closer reflection of the proportional usage of these two domesticates in this area (and see Grant 1984, 105). While a certain degree of breakage was noted, it can be assumed that minor differences in soil conditions or recovery techniques may have affected the condition of the resultant bone assemblages.

Sample size and preservation notwithstanding, the cattle age evidence at both sites is similar, indicating a wealth of adults and the importance of secondary products. In addition, the Iron Age levels at each site provided very few pig bones and a good proportion of horse remains, featuring bones with cut marks. Butchered horse bones, associated with filleting or dismemberment, have also been found at the Iron Age site of Winnall Down (Maltby 1981, 184) and further afield, at Bancroft Mausoleum, Milton Keynes (Holmes & Rielly 1994, 522), this illustrating the relatively widespread although not necessarily copious use of horses for their meat during this period.

The later Iron Age collection (Phase 4) is unusual, comprising the remains of articulated and semi-articulated red deer and cattle within the basal fills of the storage pits and a thin scatter of bones, probably food waste, amongst a variety of other contemporary pit fills. This thin spread of bones is probably indicative of redeposition rather than an attempt to use the pits for waste disposal. The cattle and red deer remains represent the deliberate deposition of complete or partially articulated carcasses. It was suggested that the latter had been allowed to rot elsewhere, although not completely, which would explain the absence of certain parts. Though none of these bones were dog gnawed, it is still possible that parts were removed by scavengers. In addition, the removal and burial of these partially rotted carcasses may have been symbolic. The other possibility is that these animals had been deliberately dismembered. No cut marks were observed but this does not necessarily suggest that butchery had not occurred. In this scenario, certain parts, in particular the cattle limb bones, may have been removed and buried elsewhere.

The burial of complete or semi-articulated animal skeletons is not uncommon amongst Iron Age sites in Southern England. It seems unlikely that they represent the deposition of unwanted (possibly diseased) carcasses. In Hampshire, the most notable example is Danebury, which provided numerous 'special

deposits', mostly single individuals but with some composite groups, from a large number of pits covering the entire Iron Age occupation period (Grant 1984, 534). These 'special deposits' tended to either be complete or consist of individual articulated limbs, rather than the partial remains or deliberately dismembered carcasses found at Kempshott Lane. In addition, while cattle are represented, there were no deer skeletons. The recovery of red deer 'special deposits' appears to be something of a rarity. A juvenile red deer was found in a composite group with a horse and a dog skeleton (both adults) within an early Roman pit at 49–59 Mansell Street, London (Barber & Bowsher 2000, 19–20), this situated in the general area of the Roman east London cemeteries. These were deliberately placed nose-to-tail, the deer followed by the dog and then the horse, perhaps symbolising a hunting scene. It is assumed that the spiral motif conjured by this arrangement has a greater similarity to Celtic than classical religious beliefs (*ibid*, 320). It is notable that the deer remains were from a young individual, similar to the [227] specimens, except that this animal was somewhat younger (with early epiphyses unfused).

It has been suggested that there was an increase in the proportion of cattle bones relative to sheep by the early Roman period (Phase 6), following a trend noticed at the nearby site of Brighton Hill South (Maltby 1995, 56). The state of preservation does not allow a clearer interpretation. It would be very unusual to find such high counts of cattle at an early Roman rural site, a pattern more commonly demonstrated by military sites or those from highly Romanised urban centres (King 1984, 189; and for examples in 1st century London see Rielly 2006, 115; and Pipe *forthcoming*). The general pattern towards a greater use of cattle could nonetheless indicate a subtle reaction to Romanising influences. The great majority of the cattle were kept well into maturity in the earlier Roman phase, suggesting the use of animals for draught purposes or perhaps for their milk. This follows the evidence at several late Iron Age and early Roman sites in this part of England (Maltby 1995, 53–4). There would appear to be a change in cattle usage by Period 7, showing a majority of younger adult cattle, probably between the ages of 2 and 3 years. Contemporary rural sites, as Owlesbury, near Winchester, clearly continue the previous pattern (Maltby 1994, 88). The significance of this change must be tempered by the rather small quantity of age data, but the evidence does show that good quality beef was consumed during this period.

There is ritual usage of both the early Roman boundary ditch and the late Roman circular shaft, as witnessed by the inclusion of three partial child 'burials' in the former and the adult inhumation in the latter. This activity may have involved some associated rites involving animal domesticates. However, there are clearly no 'special deposits' dating to these two phases and the general assemblage is not sufficiently different from comparable collections elsewhere to warrant any such conclusion. The age of the cattle from the shaft may be significant in this respect, but, as stated, the quantity of data is rather slight.

THE HUMAN REMAINS *by* Kathelen Sayer

The human remains derived from both Iron Age (Phases 3 and 5) and Roman (Phases 6 and 7) periods. Although small in size the human bone assemblage from Old Kempshott Lane forms an interesting group and, combined with the other evidence for 'exceptional deposits', such as the animal bone and pottery assemblages, it is suggestive of continuous ritual activity on the site from the Iron Age into the Roman period.

The Iron Age assemblage is small, consisting of only three fragments of human bone, two of which are joining skull fragments and the third is a humeral fragment of neonatal age. It is difficult to interpret the presence of such a small quantity of bone when considering the wider context of the site in terms of the possible 'exceptional deposits' (which included artefacts such as red deer bone, iron objects and a quern stone), and the recognised Iron Age ritual practice of depositing both articulated and disarticulated human remains within pits could suggest that they were deliberately deposited as part of a ritual event. It is of note

that all the fragments were in good condition. This could rule out the possiblity of excarnation and then selective burial of the remains, a practice thought to have taken place during the Iron Age, but it also suggests that the bones had not been exposed and become part of domestic rubbish.

The Roman assemblage consisted of the remains of at least two neonates, one of approximately 37 weeks, the other aged approximately 39 weeks old, and an adult inhumation of a female individual probably of middle adult age (35–50 years). Of the neonates the former was represented by a disarticulated left femur, a humeral shaft fragment and a fragment of an ulna and of the latter most skeletal areas are present and it is possible that this body was articulated when placed in the ditch.

The neonatal remains all came from the same rectangular enclosure ditch which also contained a large pottery assemblage and a disarticulated dog skeleton. Due to the Roman custom of burying infants outside the main cemeteries it is normal to find infants buried within features such as pits and wells and they are commonly found as foundation deposits underneath buildings. This has been interpreted both as convenient disposal of the body and as ritual activity. Given the evidence for possible Iron Age ritual deposits on site the neonates might indicate a continuation of these practices into the Roman period. A large pottery assemblage and a disarticulated dog skeleton were also recovered from this feature. The possible association of infant and dog remains within ritual contexts has been suggested for a number of Late Iron Age and Early Roman sites (Smith 2006) and 3 dogs and 2 neonates were found within a single area of a Roman cemetery at Lant Street (Sayer & Sudds *forthcoming*). Of these a single neonate and dog were found within the fill of a shallow 2nd century boundary ditch within the cemetery. The neonates from Old Kempshott Lane could therefore be part of a ritual deposit and provide further evidence for the association of human and dog remains.

The burial of the woman within the large pit does seem an unusual feature and one that in many ways seems to reflect the Iron Age practice of interring either one or more individuals within pits. These were often grain storage pits, as was seen as Danebury (Cunliffe 1991) and more recently, although a lot further afield, at Neuville-aux-Bois during work for the A19 in France (Inrap 2006). Here discoveries have suggested that individuals buried in this way were not necessarily those excluded from the rest of the community, but chosen to be given as offerings, often along with objects or animal remains. Osteologically, the woman does not appear to be unusual in any way. The skeleton is largely complete and in moderate condition, with some flaking of the bone surfaces. There is quite extensive fragmentation of the bones with the only areas not fragmented being the vertebrae and the left humerus and radius. The skull is largely complete, however the facial bones are fragmented. Ageing information was limited due to the lack of surviving teeth and suitable parts of the pelvis. She was of slight build and average height for a female during the Roman period standing at 1.57 m (5'1'). During her lifetime she had lost all of her mandibular teeth. At the time of death, although largely closed over, the healing and remodelling of the tooth sockets was still in process. Dental disease is known to be common during the Roman period due to poor dental hygiene and diets that included coarse foods and sugars. The layout of the burial is also very typical of its date and suggests respect from those burying her. The very normal nature of the burial in this unusual location might represent the observance of a Romanised version of an older tradition.

THE STRUCK FLINT by Barry Bishop

A total of 170 struck flints and a stone hammer or pounder were recovered in the excavations. The material came from a variety of features and soil horizons spread across the site although the bulk, 144 struck pieces, came from features located in Area 1. Area 2 produced a further 17 struck pieces and the stone hammer or pounder whilst the remainder came from subsoil horizons exposed in the evaluation trenches.

All of the material was made from large, thermally flawed nodules with a thick (c.1–

10mm) and relatively unweathered yellow or greyish white cortex. They would have been obtained from superficial flint rubble deposits found overlying the parent chalk, as recorded across much of the excavation areas. The condition varied considerably, much was in a variably chipped and abraded state, consistent with its residuality, whilst some was in a good, sharp, condition and showed little sign of any extensive post-depositional movement. All of the material had a milky surface-sheen, caused by incipient recortication.

Overall, the assemblage exhibited a variety of technological traits that indicated flint working at the site over a considerable period of time. A few systematically produced blades and blade-like flakes would be most characteristic of industries dating to the Mesolithic or Early Neolithic. Similarly, a few of the more competently made flakes were most characteristic of those from Neolithic or Bronze Age industries and perhaps indicate that flint working continued during these periods. No cores, retouched implements or other diagnostic pieces were identified, and it is likely that this material relates to low-level exploitation of the wider landscape, rather than any specific settlement or other activity foci. The evidence suggesting ephemeral activity prior to the Iron Age accords well with other finding from the site, as no structural or other artefactual evidence could be dated to before this period.

The Iron Age flintworking deposits

The most notable flint group came from pit [15]. It consisted of 84 struck flints found within a wide shallow pit, alongside nine sherds of Iron Age pottery and a small quantity of burnt flint (see Table 9) (50% of the feature was sampled). The identification of flint working debris from a sealed and dated context is of some significance considering the on going debates concerning the nature and even the continuation of structured flintworking after the Bronze Age, and the assemblage is therefore further described and discussed.

The assemblage was technologically homogeneous and in a good, mostly sharp condition although several pieces were broken and a few were burnt. Limited attempts at refitting were unsuccessful although similarities in cortex and flint colour suggest that at least some pieces have come from the same nodules. No smaller pieces arising from the knapping process were recovered and it seems only the larger pieces were present. The lack of refittable pieces taken together with the paucity of small flakes and pieces of knapping shatter, suggests that the assemblage was not knapped *in situ* but represents knapping waste and used implements accumulated elsewhere and selected for deposition in the pit. Whether it represents a single period of intensive use or the residues accumulated over a longer period of time is uncertain.

Table 9 Lithic material from Pit [15]

Decortication Flake	11
Flake	33
Trimming Flake	3
Flake Fragment	13
Core	1
Conchoidal Chunk	5
Retouched	18

Table 10 and Figs 17 & 18 present some of the data relating to the metrical and technological characteristics of the assemblage. It should be remembered that the sample population was not large and the data can only demonstrate its broader characteristics.

The assemblage was dominated by flakes and flake fragments that were of variable shape and size but mostly short and thick (see Fig. 17). A few flakes of blade proportions were present but none of these were systematically produced nor had parallel dorsal scars or elaborately trimmed striking platforms. Instead they were mostly thick and had wide, had unmodified striking platforms and well developed points of percussion, suggesting the use of hard hammers, and were likely to have been fortuitously produced as part of casual flake production. Nevertheless, they do demonstrate some degree of control over the knapping process that was not always evident from the other pieces present within the assemblage.

Table 10 Selected technological traits of the flakes from pit [15]

Striking Platform Type	*No.*	*%*
Cortical	4	5.9
Missing	7	10.3
Plain	41	60.3
Shattered	3	4.4
Trimmed	13	19.1
Bulb of Percussion Type	*No.*	*%*
Diffuse	20	29.4
Missing	6	8.8
Pronounced	42	61.8
Distal Termination Type	*No.*	*%*
Feathered	28	41.1
Hinged	25	36.8
Stepped	4	5.9
Missing	8	11.8
Retouched	3	4.4

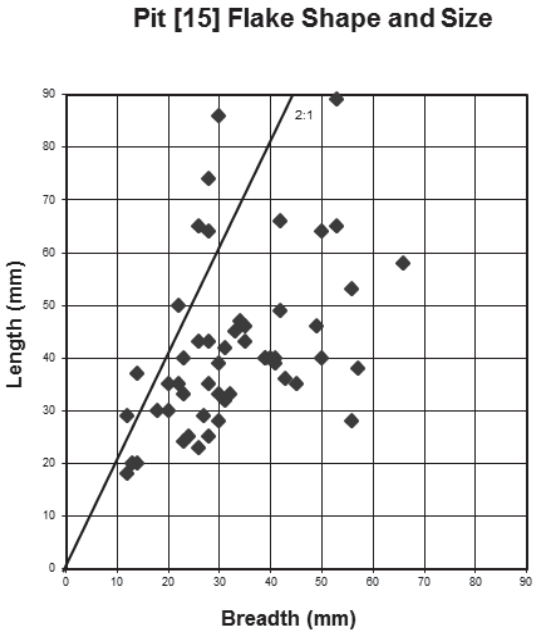

Fig. 17 Flake length and breadth distribution

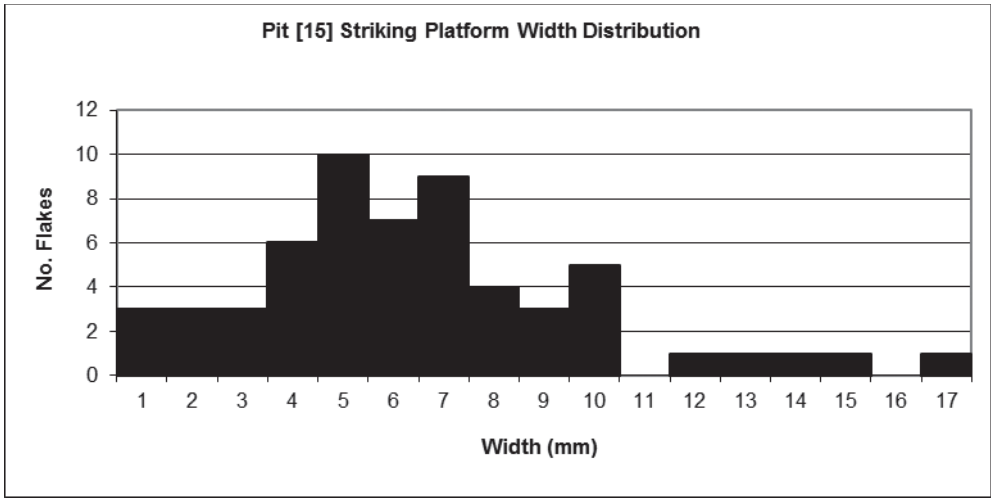

Fig. 18 Striking platform widths

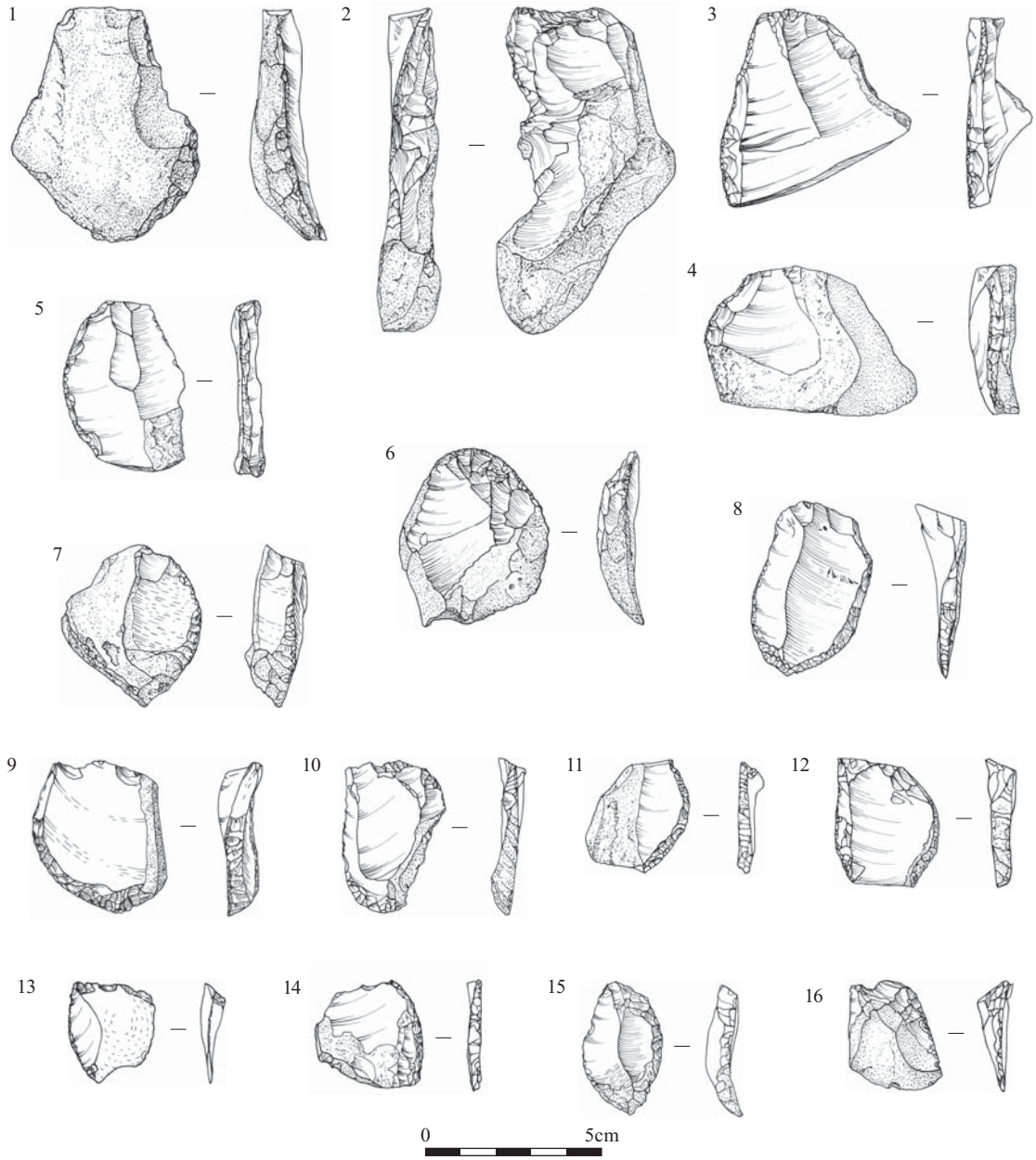

Fig. 19 Flint working flakes from pit [15]

The flakes generally had few dorsal scars, on average indicating only two previous removals per flake, signifying short reduction sequences and, consequently, nearly all flakes retained at least some remnants of original cortex. The previous flakes had principally been removed from the same direction as the flake itself although an opportunistic use of suitable

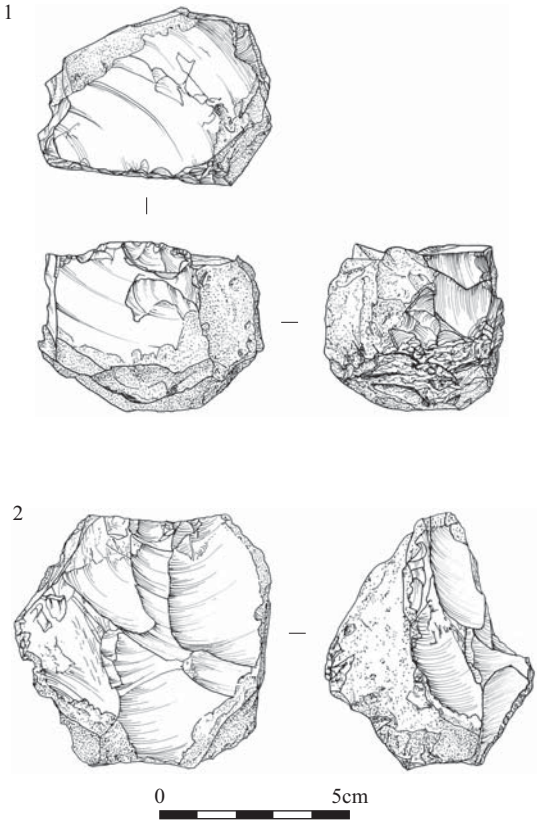

Fig. 20
1 Core reused as a hammerstone or pounder
2 Unidirectionally reduced core

platforms was apparent from a number of examples that had sporadic randomly orientated dorsal flake scars. Their striking platforms predominantly consisted of simple flake scars and were mostly thick, averaging at 6.6 mm (see Fig. 18), and only 20% showed any evidence for attempts at trimming the platform, which was mostly minimal and aimed at removing only the most excessive overhangs. There was no evidence for attempts at modifying the striking platform's flaking angle or any other forms of platform modification or core rejuvenation. The angles between the striking platforms and ventral faces were nearly always markedly oblique. Visible points of percussion, developed Hertzian cones and pronounced bulbs of percussion were commonly present and these indicate a perhaps exclusive use of hard-hammer percussion. A lack of control or concern with flake removal resulted in a high proportion of hinged distal terminations, which were present on over 46% of all complete flakes.

The almost exclusive presence of cortical flakes suggests that the nodules were only minimally reduced and a large number would have been needed to produce the flake assemblage. Only one core was present from the hollow, suggesting that others may have been removed for use or discard elsewhere. The core that was present had a number of flakes randomly removed and one of its ends was heavily battered, suggesting it may have been reused as a hammerstone or pounder (Fig. 20.1).

A very high proportion of retouched pieces was present, forming over 20% of the assemblage from pit [15]. The retouched pieces all consisted of flakes with variable degrees of light to medium edge retouch that had been undertaken at variable points around the flakes perimeter. The blanks used for retouching varied considerably in shape, size and degree of original cortex and there were no attempts to significantly alter their shapes other than provision of the retouched edge. The most common type of retouch was convex, steep and scraper-like (e.g. Fig. 19: 4, 7, 9, 10, 11, 12 and 14). In many cases the working edges had become slightly smoothed from use, supporting the possibility that they had been used as scrapers. Also well represented were pieces that had much finer and lighter retouch and these may have been used as cutting tools (e.g. Fig. 19: 3, 5, 6, 13 and 16). Others had coarse, irregular and battered retouch, resembling the kind of damage that might accrue from using the implement as a chopper (e.g.. Fig. 19: 1 and 2). Two flakes had scraper-like retouch that converged at the flakes' distal ends, these possibly having been used as blunt piercing type tools (Fig. 19: 8 and 15).

With similar characteristics and probably associated with this material were the lithics from slots 1, 3 and 5 in Roman ditch [22/102], which provided a further 27 pieces, including further and comparable retouched examples and a unidirectionally reduced core (Fig. 20.2). Other nearby features also produced small

quantities of comparable material. The spread in this area suggests either that these were the locations at which the flints were manufactured or used, or that the material was part of a more extensive spread of struck flint, some of which was residually incorporated into later features.

Although the assemblage from pit [15] as well as those from close-by features was predominantly and probably exclusively hard hammer produced, no hammer stones were recovered. The only convincing pounder or hammerstone was from pit [264] in Area A: it consisted of a lenticular pebble of hard siliceous sandstone with evidence of abrasion and battering around both ends.

Discussion

The light scatter of struck flint across Areas 1 and 2 is indicative of low-key visitation of the site from the Mesolithic to the Bronze Age.

Occasional struck flints of later prehistoric characteristics were present, scattered throughout the Iron Age features and potentially contemporary with them, although their dating cannot be precisely determined. These would be typical of later prehistoric assemblages, which are characteristically present in low densities within settlements or across the field-systems and have a high utilization rate. They are usually thought to represent opportunistic and short-lived episodes of tool production and use. By and large, it would seem that when the necessity arose, pieces of readily to-hand raw materials were struck with little overall strategy or proficiency until suitable edges were procured, used and, once the task was completed, discarded with little formality.

This expedient and immediate need for implements can be contrasted with the assemblage from pit [15], which was technologically and morphologically typical of later prehistoric assemblages, dateable from the Late Bronze Age through to the Iron Age. As a relatively large assemblage it represents a more intensive or sustained use of flint, and can be confidently dated by its associated pottery to the Iron Age. It therefore represents an interesting addition to the corpus of flintworking practices for this period. The reality and characteristics of flintworking during this time has been much discussed (Young & Humphrey 1999; Humphrey 2003). Iron Age flintworking is now generally accepted and its further investigation seen as a research priority (Haselgrove *et al.* 2001). Nevertheless, despite recent work, (e.g.. Humphrey 2007) the definition of the specific typological and technological changes in struck flint industries through the late second and the first millennia BC are still poorly documented and understood. Furthermore, the nature and significance of its production and use have also been little explored and there has been even less emphasis placed on understanding the social consequences of flintworking during these periods.

The assemblage includes a high proportion of simply made, retouched pieces, suggestive of scraping, cutting, chopping and perhaps boring-type implements, none of which are true formal types. The dominance of informally retouched pieces is typical of later prehistoric industries although the high proportions and limited range identified suggests that task-specific activities were being undertaken.

The use to which flint tools were put during the Iron Age, as with most prehistoric implements from any period, is difficult to establish. Most flakes were sharp and would have been suitable for most cutting tasks. Some of the retouch may even have been primarily so that the tools could be held without harming the user. The pieces with scraper edges may have been used simply in the processing of animal hides. Comparisons of worked bone, shale and flint tool associations at the Late Bronze Age and Iron Age site at Potterne indicate the flints may have been used in working these other materials (Humphrey 2007). Shale in particular is very hard and flint may even surpass iron knives in working this material (Calkin 1953). The flints at Old Kempshott Lane do not share the characteristic chisel-ended shape preferred for shale working, nor do they have the denticulated scraping edges that would have been useful for flax production (Brown 1992). As well as simple cutting and scraping tasks, recent experimental work has shown that a small range of flints comparable to those here would have been perfectly suitable for dismembering and filleting animal carcasses, being as

good as and sometimes surpassing iron knives (Humphrey 2007).

The material in pit [15] does not appear to have been produced *in situ*, but appears to have been dumped here. Its deposition within this pit suggests a degree of formality to its discard. Sharp flakes from flint knapping would not be desirable to have lying around and it is easy to envisage why they would have been gathered up and removed from any living or working areas. It is widely thought that, in the later parts of the Bronze Age and the Iron Age, the symbolic and ceremonial significance of stone tools, including that relating to their deposition, had largely been supplanted by other artefact types and practices, a result of flint tools slowly losing their ability to act as markers of status, wealth or proficiency: 'By the mid second millennium there is little evidence to suggest that stone tools were customarily selected for inclusion in acts of formal deposition, or that complex conventions surrounded their routine use and disposal' (Edmonds 1995, 177).

There are a growing number of later prehistoric sites in southern Britain, particularly on the chalklands, where the circumstances surrounding the deposition of struck flint, the range of artefacts included and the volume of material, suggests that complex conventions may have occasionally surrounded its generation and disposal (e.g. Bradley 1972; Fasham & Ross 1978; Saville 1981; Drewett 1982; Smith 1987; Herne 1991; Pollard 1998; Seager Thomas 1999; Greatorex 2001; Ballin 2002; Pollard 2002; Bishop & Mortimer *forthcoming*). Like many of the material categories at the site, it is possible that the flint work assemblage held significance beyond its functionality that required it to be deposited in a prescribed manner or location. Whether any such significance accrued from the implements themselves or the processes that they were associated with remains uncertain.

THE BURNT STONE by Barry Bishop

Burnt stone came from numerous features across the site. Many of these contained only small quantities of variably burnt flint likely to represent the incidental incorporation of residual 'background' waste emanating from a variety of activities including casual hearth use, as well as from industrial activities as outlined below.

The largest quantities of burnt stone were concentrated within eleven features, mostly storage or other pits. Those features that have produced quantities greater than 1kg and where deliberate dumping of the material may have occurred are principally discussed (see Table 11).

The burnt stone consisted of nodular flint with a thick cortex but also with ancient thermal plains, indicating that it was obtained from derived deposits of mass weathered chalk, as were present across much of the site. In addition to flint, small fragments of burnt sandstone, probably sarsen, were present in context [244], the primary fill of pit [201], and [168] and [169], the upper fills of pit [219]. It seems likely that this stone represented quern fragments, as similar stone used for this purpose was recovered from other Iron Age features at the site.

The flint and other stone had been uniformly and intensively heated, resulting in flint attaining a grey-white colour and becoming heavily fire-crazed, consistent with deliberate and methodical burning. The flints had therefore heavily fragmented although some individual fragments exceeded 250 g in weight. One exception was from pit [10], interpreted as a three-throw hollow. This produced over 5.5 kg of heavily burnt flint which was very fragmentary with many very small pieces.

Suggestions that the burnt stone may have been residually incorporated into these pits, such as from a spread of background waste, may be discounted as there were many pits that contained little or no burnt stone and, furthermore, most was concentrated within specific fills. These mostly contained other artefacts and materials, such as charcoal and human and animal bone. These fills have been interpreted as representing deliberate deposits of occupation debris, much of it originating from pyrotechnical processes.

The sequences in which the burnt stone was deposited in each feature varied. In most the burnt stone was either present in the last fill or concentrated within the upper fills. In

Table 11 Quantification of burnt stone by context (features containing 1 kg or more)

Fill No.	*Feature Cut No.*	*Fill sequence*	*Burnt flint fragments over 20 mm max. diam.*	*Burnt stone wt. (g)*	*Includes quern fragments?*
09	10	1 of 1	295	5567	
131	132	1st of 3	237	11131	
133	135	last of 6	510	16578	
134	135	5th of 6	670	21363	
148	150	last of 2	786	22922	
181	184	last of 3	64	4547	
183	184	1st of 3	78	5151	
198	201	last of 5	1	17	
199	201	4th of 5	4	282	
200	201	3rd of 5	4	448	
244	201	1st of 5	19	857	Yes
168	219	last of 9	12	1679	Yes
169	219	7th of 9	54	11259	Yes
170	219	6th of 9	1	9	
193	219	5th of 9	1	167	
279	288	last of 9	28	1094	
281	288	7th of 9	14	410	
282	288	6th of 9	4	129	
285	288	3rd of 9	1	31	
291	295	last of 15	12	1221	
292	295	14th of 15	3	358	
369	377	last of 7	4	347	
370	377	6th of 7	9	595	
372	377	3rd of 7	2	58	
383	384	1st of 3	10	1007	

pit [184], however, the burnt stone was split relatively evenly in both the primary and the last fill, whilst pit [384] only contained burnt stone in its primary fill. Additionally, although pit [201] had burnt stone throughout most of its fills, it was concentrated towards the base of the feature. The distribution of the burnt stone suggests that it was deposited episodically and, where more than one deposit was present within a feature, there was sufficient time for other, perhaps natural, deposits to accumulate before further dumping occurred (Cunliffe & Poole 1991, 162).

Although a degree of variation was apparent, some patterns could be discerned; most of the large deposits occurred in the final filling and seem to relate to the decommissioning and levelling of the pits, whilst in a few cases

the deposition formed a deliberate inclusion within the primary deposits.

Other contexts containing relatively large and discrete dumps of burnt flint include 0.5 kg of heavily burnt flint recovered from fill [365] of cut [335], on the northeastern side of the entrance to the Early Romano-British rectangular enclosure. This could represent the residues from simple hearth use, although the flint was heavily and uniformly burnt in a similar manner to the larger quantities recovered from the pits and a similar origin may be plausible. The smaller quantity and its discreet placement (none was recovered from any of the others sections excavated through the enclosure) suggests that it represents a 'token' deposit of burnt flint gleaned from the residues produced by burning more substantial quantities. Feature [407] also produced nearly 1kg of burnt flint spread throughout its fills, perhaps indicating that it represents residual material accidentally incorporated. The two largest quantities, of 406 g and 363 g, came from the initial filling of cut [435] in the base of feature [407], and the final levelling of the features. These deposits were associated with artefacts and animal bone recalling the similar sequences for some of the storage pits.

Discussion

It appears that large quantities of flint alongside some fragments of quernstone were deliberately heated and deposited within pits in a seemingly purposeful manner. The rational behind this remains enigmatic but what is apparent is that it was related to similar depositional practices involving other material categories in cut features. It is worth considering some of the activities that led to the creation of burnt stone as well as its eventual discard. The deliberate heating of often-large quantities of stone is frequently documented at prehistoric sites. In addition to the classic burnt mound sites, which most frequently belong to the Bronze Age and bear few of the characteristics noted here, large quantities of burnt flint are often recovered from Iron Age settlement sites, mostly in similar depositional circumstances as recorded here (e.g. Cunliffe 1976, 30–34). Close by, at Winklebury hillfort, a number of comparable and similarly dated pits also had complex sequences of infilling that sometimes included large quantities of deliberately deposited burnt flint nodules (Smith 1977, 46–47). At Winklebury it was suggested that burnt flint may have been produced in order to parch corn, but it was also noted that, despite the considerable evidence for burning, very few parched grains were found (Smith 1977, 111). Many other explanations for the creation of substantial quantities of burnt stone have been put forward, perhaps the most favoured seeing it as being connected with cooking activities, its scale suggesting communal efforts, perhaps associated with feasting or ceremonial practices. Other explanations regard it as the residues from saunas (Barfield & Hodder 1987) or a variety of industrial processes, such as leather making or wool processing, and ceremonial purposes have also been put forward (e.g. Hedges 1975; Barfield & Hodder 1987; Barfield 1991; Jeffery 1991; Dunkin 2001).

THE WORKED STONE *by* Kevin Hayward

A small assemblage (8 fragments, 11.11 kg) of worked, portable stone artefacts (quernstones) from Middle Iron Age to Early Roman occupation levels were recovered. It should be noted that the site is on the Upper Chalk (Upper Cretaceous) of Hampshire, which contains flint and hard chalk 'clunch' both of which are suitable for walling materials. The Tertiary Plateau 20 km to the north is characterised by hard ironstones and sarsens as well as poorly consolidated sediments. Finally, this part of Hampshire is within reach of a small outcrop (15–20 km) of Upper Greensand sited around the Kingsclere area. Apart from sarsen stone, none of these are hard or coarse enough to be used in quernstones – which means the material for part of this assemblage will have been brought in from further away.

Each of the 8 examples of quern and other material was identified to rock type. A common worked stone type at Old Kempshott Lane was Lodsworth Greensand of which the harder grains facilitate the grinding of foodstuffs (3 examples weighing a total of 2.035 kg, 18.3%

of the stone assemblage). An upper rotary quernstone from fill [233] of grain storage pit [227/17] was composed of this material, along with two saddle querns from the basal fills of pits [264] and [368]. All of these were in Early to Late Iron Age contexts. Quernstones of identical lithological character have been identified by the specialist from the late Iron Age/Early Roman Levels at Insula IX Silchester and at Roman Chichester and much further afield (Peacock 1987). The outcrop of Lodsworth (or Pulborough) Greensand (Lower Greensand) has a relatively restricted geographical distribution sited around the Lodsworth-Pulborough area of West Sussex (Peacock 1987). This exposure lies about 60 miles south-east from Old Kempshott Lane and was accessible during the Roman period via the Silchester- Chichester Road and then Stane Street north to Pulborough. Before this, established prehistoric trackways along the South and Hampshire Downs would have brought the material in.

Three Middle to Late Iron Age large querns are made from Sarsen Stone: a beehive example, found within the basal fill of storage pit [242], a lower rotary stone, found within the basal fill of pit [264] and an upper rubber stone for a saddle quern, also within the basal fill of the same pit. The rubber stone seems to form the upper part of the Lodsworth Greensand concave saddle quern from the same context.

Outcrops of Sarsen are found within the Quaternary deposits of the Silchester Plateau 20 km to the north. These, however, are too fine and do not appear to have been used at Silchester for quern manufacturing. The source is difficult to pinpoint as Sarsen can be found throughout central-southern England but a local source seems probable.

One large fragment of lower rotary quern composed of Quartz Conglomeratic Sandstone was found in [358], the uppermost fill within Slot 1 of the Late Iron Age to Early Romano-British 'banjo' ditch [346]. The closest match is with a Quartz Conglomerate from the Basal Upper Old Red Sandstone from the Forest of Dean/ Bristol area (160–210 km away). Fractured quartz pebbles are characteristic of these sandstones as they are geologically old. They have been used as quernstones since the Late Iron Age/Roman Period throughout south-central England including at Silchester (Shaffrey 2006). However, this example is also similar to a local quartz conglomerate (Idsworth Stone from the Tertiary of South east Hampshire (Waterlooville-Havant 72 km away) used in one rotary quern example from Idsworth (now at Fishbourne Store). A third possibility is that it is a coarse Millstone Grit (Upper Carboniferous) probably from Bristol (160–195 km) but could come as far as South Yorkshire/Derbyshire (400 km).

As expected for an Iron Age/Early Roman rural site, quernstones dominate the stone assemblage (99% by weight). Most of these seem to relate to the Iron Age pits in Areas 1 and 2 and may represent placed 'exceptional' deposits. Saddle querns are more common than rotary querns, reinforcing the idea that these were in use during the Iron Age rather than Roman period.

Discussion

The variety of rock types used in quernstones at the site should be seen in terms accessibility to outcrops of Sarsen on the Gravel Plateau, Lower Greensand on the South Downs and the Millstone Grit / Quartz Conglomerate of the Bristol region. Prior to Roman occupation, trackways supplying Lodsworth Greensand to Late Iron Age Silchester would have run close to this site. In the Roman period, the Silchester to Basingstoke road ran close by, connecting the site with the rest of the Roman road network via Silchester.

The results mirror the stone analysis undertaken on the assemblage from the nearby Iron Age Farmstead of Brighton Hill South (Fasham & Keevill 1995). Here, fragments of Lower (probably Lodsworth) Greensand rotary and saddle querns were unearthed along with '*grey sandstone*' (Fasham & Keevill 1995, 49), which may be Sarsen.

Lodsworth Greensand was commonly used in the manufacturing of querns during the Iron Age in south-central England, and the assemblage from this site further supports its probable importance. The use Sarsen querns is more unusual.

ARCHAEOBOTANICAL ANALYSIS by L Allot

This analysis aims to characterise the charred plant remains within Phases 3 and 4 (Iron Age) and Phase 5 to 7 (Roman) at Old Kempshott Lane, to establish evidence for patterns within their contents as well as between features. Charred botanical assemblages from grain storage pits recorded elsewhere in southern Britain, such as Winnall Down (Monk 1985) and Brighton Hill South (Carruthers 1995) have produced evidence for farming practices, harvesting techniques and grain store maintenance used during the Iron Age. This analysis compares the assemblages from Old Kempshott Lane with those documented in the literature. A charcoal analysis was undertaken to identify woody taxa used for fuel and to establish evidence for woodland composition, exploitation and management.

Samples were processed and identified using standard extraction and comparison methods (Schweingruber 1990; Hather 2000; Martin & Barkley 2000; Schoch *et al.* 2004; Jacomet 2006; Cappers *et al.* 2006). Nomenclature used follows Stace (2005). To facilitate further identification of some taxa, such as the *Polygonum/Rumex* sp., it was necessary to section a proportion of the seeds and locate the embryo. Charred plant remains have been listed in Table 12. Charcoal and woody taxa are enumerated in Table 13.

Results of the plant macrofossil analysis

Phases 3 and 4: Iron Age

Sixteen samples were included in the analysis of the plant remains. These were taken from a small pit/posthole [125] and from eight storage pits ([19], [17], [219], [242], [192], [227], [201] and [288]).

Context (124), the fill of [125] was dominated by arable weed seeds from the knotweed family (*Polygonum* sp./*Rumex* sp./*Bilderdykjia* sp. knotgrass/docks/bindweed). Other plants represented include *Carex* sp. (sedge) and arable weeds *Galium* sp. (bedstraws), *Bromus* sp. (brome grass) and *Chenopodium* cf. *album* (fat hen). Crop seeds were scarce. Two wheat grains, one *Triticum dicoccum/spelta* (emmer/spelt wheat) and one *Triticum* cf. *aestivum* (bread wheat) were present. Woodland and hedgerow trees were represented by *Corylus avellana* (hazelnut) shell fragments and a *Prunus* sp. (cherry) shell. Although prominent within this assemblage the 41 hazelnut shell fragments may represent only a small number of whole nuts.

Storage pit features ([19], [17], [219], [242], [192], [227], [201] and [288]) were rich in cereal caryopses including *Triticum* spp. (glume wheats emmer and spelt, and free-threshing, bread wheat), *Hordeum* sp. (including some *H. vulgare* – hulled 6-row barley) and occasional *Avena* sp. (cultivated or wild oats). Wheat glume bases, indeterminate stem fragments, detached embryos and a grass culm were present in very small quantities. Chenopodiaceae (goosefoot) taxa such as *Atriplex* sp. (oraches) and *Chenopodium* cf. *album* (fat hen) were particularly common as were knotweed family taxa (*Polygonum* sp./*Rumex* sp./*Bilderdykjia* sp. – knotgrass/docks/bindweed). Many of the storage pit assemblages were rich in weed seeds in which arable weeds and plants occurring on disturbed ground dominate. In addition to goosefoot and knotweed taxa further arable weeds include *Agrostemma githago* (corn cockle), *Silene* sp. and *Stellaria* sp. from the Caryophyllaceae (pink) family, *Galium* sp. (bedstraws), *Viola* sp. (violets), *Brassica/Sinapis* (cabbages/mustards), *Papaver* sp. (poppy), and taxa from the Compositae (daisy) family. Occasional grasses including *Bromus* sp. (bromes) were recorded in several samples, particularly the basal fill (244) of pit [201]. Compared with the arable weeds, taxa typical of wetter or poorly drained ground were infrequent. Two storage pit samples contained occasional *Carex* sp. (sedge) and *Eleocharis* sp. (spike-rush) seeds (Table 12). Small numbers of leguminous taxa were also recorded. The majority were *Trifolium* sp. (clover) and probably represent taxa inadvertently collected with the cereal crops. *Pisum sativum* (garden pea) and *Vicia/Lathyrus* sp. (vetch/tare) that are more frequently considered crops were also represented by single seeds in the basal fill (223) of pit [192].

Phase 6: Roman

The single sample from the fill (46) of Roman ditch context [30] was dominated by wheat grains (both emmer/spelt and bread wheat).

Table 12 Charred plant macrofossil analysis

	Phase number	*3 / 4*															*6*
	Sample number	*10*	*4*	*5*	*7*	*21*	*51*	*42*	*43*	*46*	*35*	*47*	*36*	*54*	*55*	*58*	*6*
	Feature number	*125*	*19*	*19*	*17*	*219*	*242*	*192*	*227*	*201*	*201*	*201*	*201*	*288*	*288*	*288*	*30*
	Context fill number	*124*	*18*	*24*	*48*	*171*	*258*	*223*	*235*	*244*	*199*	*200*	*200*	*279*	*281*	*285*	*46*
	Feature type	*Small posthole /pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Silty clay fill in Storage Pit*	*Silty clay fill in Storage Pit*	*Re-deposited natural, silty clay in Storage Pit*	*Ditch*
	Flot volume (ml)	*10*	*10*	*15*	*15*	*15*	*10*	*30*	*45*	*60*	*<5*	*<5*	*10*	*<5*	*40*	*10*	*10*
CEREALIA																	
Triticum dicoccum L.	emmer glume base							7	3								
Triticum spelta L.	spelt glume bases							1		3							
Triticum dicoccum/spelta	emmer/spelt glume bases								2	1						3	
indet. Cerealia	detached embryos							7	5	3							
indet. Cerealia	spikelet forks																1
indet. Cerealia	chaff fragments						2		8								
Triticum dicoccum/spelta	emmer/spelt caryopses	1		2	4	4	111	419	270	231	1	7		14		3	64
Triticum cf. *aestivum* L.	bread wheat caryopses	1				1	9	34	38	14							77
Triticum sp.	wheat caryopses		6							65		1		2	6		118
Hordeum vulgare L. emend.	6-row hulled barley caryopses					1		1									

	Phase number	*3 / 4*															*6*
	Sample number	*10*	*4*	*5*	*7*	*21*	*51*	*42*	*43*	*46*	*35*	*47*	*36*	*54*	*55*	*58*	*6*
	Feature number	*125*	*19*	*19*	*17*	*219*	*242*	*192*	*227*	*201*	*201*	*201*	*201*	*288*	*288*	*288*	*30*
	Context fill number	*124*	*18*	*24*	*48*	*171*	*258*	*223*	*235*	*244*	*199*	*200*	*200*	*279*	*281*	*285*	*46*
	Feature type	*Small posthole /pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Silty clay fill in Storage Pit*	*Silty clay fill in Storage Pit*	*Re-deposited natural, silty clay in Storage Pit*	*Ditch*
	Flot volume (ml)	*10*	*10*	*15*	*15*	*15*	*10*	*30*	*45*	*60*	*<5*	*<5*	*10*	*<5*	*40*	*10*	*10*
Hordeum sp.	barley caryopses		3		12	2	10		303	6				1		1	
Avena sp.	oat caryopses				2	1			1							1	
indet. Cerealia	caryopses fragment			6	19	13				37	3	7	1			4	
CARYOPHYLLACEAE																	
Agrostemma githago L	corn cockle							1									
Stellaria sp.					2			2									
Silene sp.					5		4	2									
Indeterminate					2					6							
CHENOPODIACEAE					19	2			29				1	4	10		
Atriplex sp.	orache		28	2	9	7	25	3	35	48			1		15	27	
Chenopodium cf. *album* L.	fat hen	3			24	126			144	26	7		8		18	23	1
Chenopodium sp.			12			24	59	17	2								
COMPOSITAE																	
Anthemis cotula L.	stinking mayweed							3	5								
Lappsana communis L.	nipplewort							2	6								
cf. *Picris* sp.									2								
Indeterminate				1				5	17								
BETULACEAE																	

Table 12 (cont.) Charred plant macrofossil analysis

	Phase number	*3 / 4*															*6*
	Sample number	*10*	*4*	*5*	*7*	*21*	*51*	*42*	*43*	*46*	*35*	*47*	*36*	*54*	*55*	*58*	*6*
	Feature number	*125*	*19*	*19*	*17*	*219*	*242*	*192*	*227*	*201*	*201*	*201*	*201*	*288*	*288*	*288*	*30*
	Context fill number	*124*	*18*	*24*	*48*	*171*	*258*	*223*	*235*	*244*	*199*	*200*	*200*	*279*	*281*	*285*	*46*
	Feature type	*Small posthole /pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Silty clay fill in Storage Pit*	*Silty clay fill in Storage Pit*	*Re-deposited natural, silty clay in Storage Pit*	*Ditch*
	Flot volume (ml)	*10*	*10*	*15*	*15*	*15*	*10*	*30*	*45*	*60*	*<5*	*<5*	*10*	*<5*	*40*	*10*	*10*
Corylus avellana L.	hazel nut shell fragments	41															
CRUCIFERAE																	
Brassica / Sinapsis sp.	cabbages/ mustards						1	2									
CYPERACEAE																	
Carex sp.	sedge	3			1			7							1		
Eleocharis sp.	spike-rush							8									
GRAMINEAE				1					2				1				
Bromus sp.	brome	1				1	6	6		64						1	
Indeterminate culm bases															1		
JUNCACEAE																	
cf. *Juncus* sp.	rushes																1
LEGUMINOSAE																	
Trifolium sp.	clover				2				4								1
Vicia sp./*Lathyrus* sp.	vetch, tare							1									2
Pisum sativum L.	Pea							1									
PAPAVERACEAE																	
Papaver sp.	poppy				2		1	2	9							1	

	Phase number	*3 / 4*															*6*
	Sample number	*10*	*4*	*5*	*7*	*21*	*51*	*42*	*43*	*46*	*35*	*47*	*36*	*54*	*55*	*58*	*6*
	Feature number	*125*	*19*	*19*	*17*	*219*	*242*	*192*	*227*	*201*	*201*	*201*	*201*	*288*	*288*	*288*	*30*
	Context fill number	*124*	*18*	*24*	*48*	*171*	*258*	*223*	*235*	*244*	*199*	*200*	*200*	*279*	*281*	*285*	*46*
	Feature type	*Small posthole /pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Basal fill of storage pit*	*Storage pit*	*Storage pit*	*Storage pit*	*Silty clay fill in Storage Pit*	*Silty clay fill in Storage Pit*	*Re-deposited natural, silty clay in Storage Pit*	*Ditch*
	Flot volume (ml)	*10*	*10*	*15*	*15*	*15*	*10*	*30*	*45*	*60*	*<5*	*<5*	*10*	*<5*	*40*	*10*	*10*
PLANTAGINACEAE																	
Plantago sp.	plantains							1									
POLYGONACEAE					2	1	2						1				
Polygonum/Rumex/ Bilderdykjia sp.	knotgrass/ dock/ bindweed	45	19	2	16	9	33	228	144	19	1				25	3	
Polygonum aviculare L.	knotgrass						2										
cf. *Persicaria* sp.	knotweed							14									
ROSACEAE																	
Prunus sp.	cherries	1															
Aphanes arvensis L.	parsley piert							1									
RUBIACEAE																	
Galium sp.	bedstraws	10						1	3	1							
VIOLACEAE																	
Viola sp.	violet				5		9		13								2
Unidentified seeds			3				5		4	1			4				

Table 13 Charcoal analysis

		Phase number	2								*Total*
		Sample number	*10*	*29*	*30*	*19*	*18*	*14*	*16*	*41*	*61*	
		Feature number	*125*	*184*	*184*	*147*	*150*	*132*	*135*	*219*	*295*	
		Context fill number	*124*	*181*	*183*	*146*	*148*	*131*	*134*	*218*	*294*	
		Feature type	*Small Posthole/ pit*	*Small Rectangular Pit*	*Small Rectangular Pit*	*Small Pit*	*Pit*	*Pit*	*Large irregular Pit*	*Basal Fill of Storage Pit*	*Basal Fill of Storage Pit*	
ULMACEAE	*Ulmus* sp.	elm				2						2
FAGACEAE	*Quercus* sp.	oak		10	2			3		30	27	72
SALICACEAE	*Salix/Populus* sp.	willow/poplar			3							3
ROSACEAE	cf. *Rosa*		12									3
sub.fam. Maloideae	Maloideae group (incl. *Crataegus* sp., *Sorbus* sp., *Malus* sp. & *Pyrus* sp.)	incl. hawthorns, whitebeams, apple, pear		5	9	5		2	27			48
sub.fam. Prunoideae	*Prunus* sp.	cherries		3	3		2	2		3		13
RHAMNACEAE	cf. *Frangula alnus* Mill.	alder buckthorn					2			2		4
ACERACEAE	*Acer* cf. *campestre* L.	field maple		2								2
BETULACEAE	*Corylus avellana* L.	hazel		3	2	6	16					27
	cf. *Corylus avellana* L.	hazel				3		12	6			21
	Alnus cf. *glutinosa* L.	alder					2		3			5
OLEACEAE	cf. *Fraxinus excelsior* L.	ash				3						3
Total			12	23	19	19	22	19	36	35	27	212

A single spikelet fork base was present however this was poorly preserved and could not be identified. Weed seeds of cf. *Juncus* sp. (rush), *Viola* sp. (violet), *Chenopodium* cf. *album* (fat hen) and Legumes, *Trifolium* sp. (clover) and *Vicia/Lathyrus* sp. (vetch/tare) were present in small numbers.

Results of the charcoal analysis

Phases 3 and 4: Iron Age

Many of the samples produced small charcoal assemblages, all from the Phase 3 and 4: Iron Age occupations. No Roman contexts were included because the charcoal assemblages from these were too small for analysis. On the whole, internal anatomical structures were well preserved enabling identifications to be made to genus or species where possible. Within certain families the wood anatomy of different taxa, such as *Crataegus* sp. and *Sorbus* sp. in the Maloideae sub family, is very similar and cannot be satisfactorily differentiated based on anatomical characteristics alone. In such instances it is necessary to group taxa. In some instances a more refined identification can be given if the natural distribution of a taxon within Europe is considered. On this basis although *Acer* spp. display very similar anatomy the identification of *Acer* cf. *campestre* can be given because other species within the genus do not naturally occur in Britain (Hather 2000; Stace 2005).

Samples were pit/posthole [125], two fills, (181) and (183), of small rectangular pit [184], the fills (146), (148) and (131) of pits [147], [150] and [132] respectively and the fill (134) of a large irregularly shaped pit [135] were analysed. The basal fills (218) and (294) of storage pits [219] and [295] were also included. Due to unpredictable fragmentation of wood prior to and during charring the use of fragment frequency of charcoal specimens is problematic and is therefore not employed here to suggest prominence of taxa within the past vegetation.

The analysis revealed 11 woody taxa (Table 13). *Corylus avellana* (hazel), *Quercus* sp. (deciduous oak), *Salix/Populus* sp. (willow/poplar), *Alnus glutinosa* (alder), cf. *Frangula alnus* (alder buckthorn), *Acer* cf. *campestre* (field maple), *Ulmus* sp. (elm), cf. *Fraxinus excelsior* (ash) and several Rosaceae taxa including *Prunus* sp. (cherries), *Rosa* sp. (roses) and the Maloideae group which includes *Crataegus* spp., *Malus* sp. *Pyrus* spp. and *Sorbus spp.* (hawthorn, apple, pear & whitebeam) were identified in many of the samples. Feature [125] a small pit/posthole contained rose taxa only and the basal fill (294) of grain storage pit [295] contained deciduous oak. More than one taxon was identified in the other features. Many of these taxa are common components of hedgerows or oak woodland and are able to grow on calcareous or clay rich soils (Stace 2005). Taxa such as willow, poplar and alder may grow adjacent or near to rivers and in damper woodland than the other taxa.

Discussion

Glume wheat taxa dominated the cereal assemblages with free-threshing grains present in smaller quantities in many of the samples. In general barley grains were also secondary to the non-free threshing wheats although a sample from the basal fill (235) of grain storage pit [227] provides an exception. This sample contained barley and spelt/emmer wheat in roughly equal proportions. Glume bases provided positive identifications of both spelt and emmer wheat for samples from the basal fills, (223) and (235), of storage pit features [192] and [227]. Although more emmer glume bases were recorded than those of spelt (Table 12) they were noted in such small quantities that the data cannot be used to suggest emmer was dominant in these samples.

The archaeobotanical record indicates that cereals were more prominent than other crops such as leguminous plants although caution should be taken in assuming that this bias towards cereals in the assemblage is representative of the farming economy as a whole. These crops may be disproportionately over-represented because of the dominance of storage pits used for grain.

Based on an increase in oats and a decrease in bromes through the Iron Age in wheat dominated assemblages, Campbell and Hamilton (2000) suggested that spring sowing of wheat crops first occurred during the late

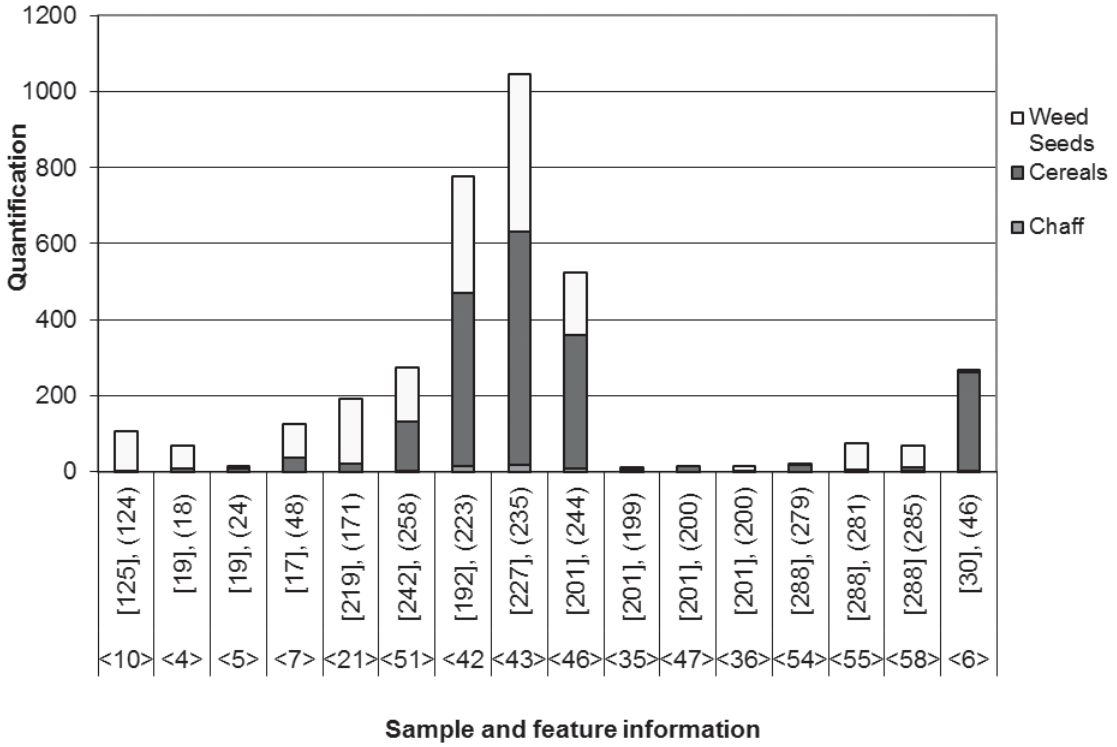

Fig. 21 Chaff, cereals and weed seed proportions

Iron Age. As a contrast the samples from this site contained very few oat grains and while bromes are also not common their presence in several of the storage pits may indicate that autumn sowing was still practiced. The broad range of arable weed seeds present display a variety of growth forms and together with the large quantities of weed seeds present can be used to hypothesise that the crops were probably cut low down on the stems rather than selecting the crop ears only, and that weeds were not removed during harvesting but were removed later through threshing.

Sampling revealed that the basal fills of grain storage pits contain greater concentrations of charred botanical remains than the upper fills. As demonstrated by Reynolds (1974) through experimental work this most likely results from sterilising the pits by burning grain, weeds and chaff remaining at the bottom after the stored grain has been removed. Samples taken through the fills of pit [201] show a marked decrease in charred remains between the primary and secondary fills (Fig. 21) suggesting that they may have been abandoned, becoming gradually infilled after sterilisation rather than being cleaned and reused. The same pattern is evident at Winnall Down (Monk, 1985) and at Brighton Hill South (Carruthers 1995).

Iron Age storage pits on many sites contain chaff and are weed seed-rich but have grain-poor basal fills (Monk 1985; Carruthers 1989; 1995). With reference to a quote by Pliny, these have been interpreted by Monk (1985) as primary crop processing debris used to line the pits before storing grain. It has also been suggested that the deposits would become further enriched in chaff and weeds if such waste was used to ignite the remnant grain during sterilisation. By contrast chaff was not common in the assemblages from the site although weed seeds were prominent. This suggests the assemblages do not represent crop processing waste nor do they simply represent the processed crop

stored in the pit. In this instance both weeds and chaff would be more poorly represented. It is possible that differential preservation and charring has occurred and the chaff elements have not survived however this is not a very satisfactory explanation for a pattern present throughout the Iron Age contexts. It is perhaps more probable that weeds were very common in the harvested crops and a larger number of weeds than usual have remained in the grain once it was processed. The assemblage composition certainly does not suggest that chaff was used as fuel during sterilisation and in fact oak wood present in the charcoal assemblage from these fills may have been used instead.

The analysis of grain storage pits by Hill (1995) suggests a deliberately deposited element to the infilling process. It is possible, therefore, that the charred plant remains recovered from the storage pits at Old Kempshott Lane were not a product of a purely functional process at all (i.e. pit sterilisation by fire) but were deposited (deliberately or otherwise) for other reasons. This would perhaps go some way to explaining the unusual proportion of weeds present in the material.

Roman ditch [46] displays a different composition to the Iron Age samples. Although this assemblage is likely material redeposited in the ditch from elsewhere rather than resulting from a primary activity. The scarcity of weed seeds and dominance of grain probably indicates that it derived from processed crops. None of the Iron Age assemblages display a similar pattern and it appears that the removal of weed seeds was more successful in this instance.

The charred plant remains provide scanty evidence for the natural vegetation. It has already been noted that weeds occurring in arable land or on disturbed ground are prominent. In addition sedges and spike-rush indicate the presence of damper ground, which is supported by the woody taxa willow, poplar and alder in the charcoal assemblage. Hedgerow taxa (including hazelnut, cherry and hawthorn) may have been exploited for fruits as well as for their wood are indicated. The charcoal assemblage also suggests that oak woodland containing hazel, ash and field maple may have been present in the vicinity providing a valuable source of fuel wood and wood for construction. It is likely that coppicing was practiced and several taxa in the charcoal assemblage including hazel, ash and elm would have been suitable. Unfortunately, the charcoal assemblage consisted of small fragments of charcoal rather than whole sections of roundwood and therefore cannot positively confirm coppicing.

Old Kempshott Lane has revealed evidence for a glume wheat based farming economy during the Iron Age with bread wheat and barley present as smaller components. It has not been possible to determine whether spelt or emmer were dominant in the assemblage due to the scarcity of glume bases. During the Roman occupation both bread wheat and glume wheat were present. As the Roman evidence is derived from a single sample it is not possible to draw conclusions about farming practices at this time. No strong evidence has been obtained for woodland management, coppicing or for wood selection although taxa commonly coppiced such as hazel and ash were present. Hedgerows and oak woodland were exploited for fuel wood and some food resources. Other non-crop foods may also have been used although due to their occurrence with cereal grains these have been interpreted as arable weeds.

Many of the assemblages taken from Iron Age grain storage pits produced grain and weed seed rich assemblages. The basal fills contained greater concentrations of charred botanical remains than the upper fills. This pattern has been observed in similar features at other Iron Age sites and is interpreted as evidence for sterilising the pits. Unlike the samples from other sites, however, very small quantities of chaff were present in the basal fills and were absent in the remaining contexts. It appears that chaff was not used to ignite the pit contents but oak wood present in the charcoal assemblage may have been used instead. As weed seeds (which are generally removed with the chaff during processing) are prominent throughout the Iron Age samples, it is more difficult to interpret the lack of chaff. In the absence of a more satisfactory explanation, it is suggested that weeds were common in the crops and became over represented in the stored grain; however it should be noted

that they may derive from an entirely different non-functional origin. Fewer weeds were present in the Roman ditch sample, which may indicate that there was better control over the weeds growing in the crops or that the weed seeds were more successfully removed during processing.

GENERAL CONCLUSIONS

The features and artefacts in Areas 1 and 2 provide indirect evidence of Iron Age and Roman animal husbandry, agrarian activity and nearby small-scale habitation. No dwellings or four post granaries were found, suggesting the crop mark complex recorded on the Hampshire Historic Environment Record in the field to the immediate west was the location of actual settlement. The site fits within a wider regional trend involving initial establishment in the Iron Age, continued settlement in the Early Roman period, possible temporary abandonment in the 2nd to 3rd centuries, and limited re-occupation in the 3rd to 4th century followed by final abandonment at the end of the 4th century.

Other sites suggest that small-scale Iron Age to Romano-British settlements were preferentially positioned on higher ground. Old Kempshott Lane fits this pattern. Most of the Iron Age and Romano-British archaeological activity was concentrated at the top of the dry valley, the main focus of the settlement perhaps being beyond the western site boundary on the crest of Kite Hill.

The faunal assemblage indicates horse, cattle, pigs, sheep and goats were exploited, along with domesticated dogs. Clearly some of the animals were used for food. Both primary and secondary products may have been consumed, as the age range of the cattle based on epiphysial fusion suggests they were largely mature individuals capable of producing milk. The remains of red deer suggest the hunting of wild animals formed part of the resource base.

Spelt, emmer and barley grains were retrieved from probable grain storage pits. These cereals were therefore kept and grown on or near the site. Weed seed assemblages indicate autumn or winter sowing, presumably of hardy spelt, may have taken place during the Late Iron Age.

The presence of querns suggests grain was processed on or close to the site. As some were composed of non-local materials, the existence of a trade network, extending to the Lodsworth-Pulborough area of West Sussex and perhaps as far as Bristol, Derbyshire or Yorkshire, is confirmed. The site would have been well connected in the Iron Age and Roman periods, being situated next to The Harroway and the Silchester to Winchester Roman road.

Evidence of placed offerings in the form of animal and human remains, pottery, quern stones, loom weights and small finds within some features suggest certain pits and ditches were significant. These features represented boundaries between different places and possessed aspects of liminality, as exemplified by the non-spaces of boundaries, the uncertainty of seed corn storage and the penetrative nature of deeply intrusive pits and quarries into the depths of the earth. These features may therefore have represented 'interfaces between the known and other worlds' (Woodward 1992, 51) into which offerings to the gods could be placed. The deposition of these offerings may have been viewed as crucial to the welfare of the community, enabling its future success. These beliefs appear to have perpetuated throughout the life of the settlement at Old Kempshott Lane, from its beginning in the Iron Age to its abandonment in the Late Roman period. The inhumation in the Late Roman quarry suggests fusion between indigenous beliefs and Roman burial traditions.

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