

EXCAVATIONS AT LOWER EDMONTON AND THE ARCHAEOLOGY OF THE LOWER LEA VALLEY

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SUMMARY

Excavations at Plevna Road and Montagu Road, Lower Edmonton, both bordering the Lea Valley floodplain, have produced evidence for the exploitation of this area from the Mesolithic through to the present. Although little of the evidence can be interpreted unequivocally, it possibly best demonstrates a sequence that begins with a localised and piecemeal opening up of the woodland cover during the Mesolithic and Early Neolithic periods. The clearance is followed during the Early Neolithic by attempts to delineate and demarcate the landscape involving the construction of ditches adjacent and parallel to tributaries of the Lea. Also during the Early Neolithic two large curvilinear ditches were constructed which may represent a large enclosure. The latter was succeeded by a series of large postholes, possibly representing an arrangement of timber uprights. None of these features fit happily within a simplistic 'domestic' interpretation and the possibility that they represent 'ceremonial' structures is discussed. Towards the end of the Bronze Age and into the Iron Age the archaeological record changes character and becomes dominated by pits, postholes, gullies, and boundary ditches. These are interpreted as representing the development of a more permanently settled and formalised agricultural landscape. By the end of the prehistoric period the area seems to have been largely abandoned to archaeologically visible activities. Post-medieval ditches and post-alignments in the north-west corner of Plevna Road may mark the boundary of Edmonton village from the 17th century onwards, with the rest of Plevna Road and Montagu Road only being utilised for agriculture and marginal activities such as quarrying, until urban development subsumed the sites during the 19th and 20th centuries.

INTRODUCTION

This report details the findings of two excavations conducted in Lower Edmonton in the London Borough of Enfield. Plevna Road is located immediately to the east of the centre of Lower Edmonton (TQ 3450 9345) and Montagu Road is situated approximately 700m east of Plevna Road (TQ 3530 9360) (Fig 1). It was decided to publish the results of the two excavations together as the sites complement and contrast with each other in terms of the topography, environment, and cultural exploitation.

All of the archaeological work was commissioned and generously funded by Green Horizon Housing and undertaken by Pre-Construct Archaeology. The specifications for all the archaeological works were approved and monitored by Mr Rob Whytehead of the Greater London Archaeological Advisory Service, English Heritage, on behalf of the London Borough of Enfield.

The excavation at Plevna Road (site code PVA99) was conducted during August and November 1999 and that at Montagu Road was undertaken in three phases, lasting from August 1999 to September 2000. At Plevna Road nine trenches were opened. The first phase of archaeological excavation at Montagu Road (site code MGU 99) comprised one large open area excavation towards the south-east of the site and a series of smaller trenches to the west, on land previously known as the Meadowville Day Centre. The second phase was conducted on land immediately to the south of the first phase, at the former Waste Depot. This comprised

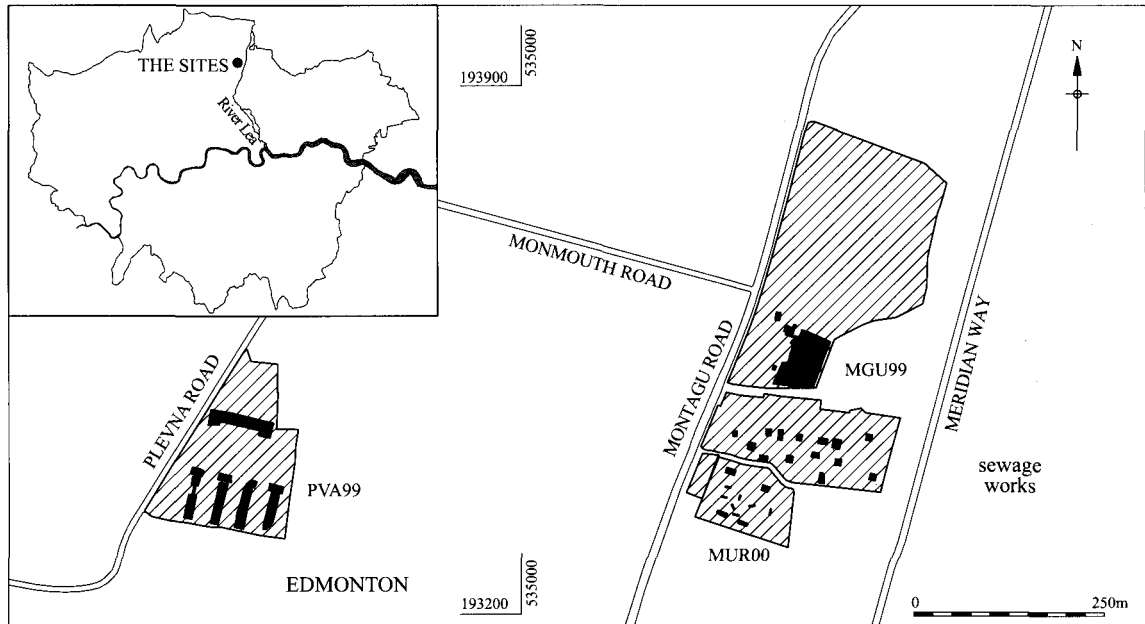


Fig 1. Site locations

a series of 14 small trenches and 18 trial pits. Phase 3 (site code MUR 00) concerned a block of land immediately to the south of the Phase 2 excavations. 11 trenches and 7 trial pits were opened; these revealed only relatively modern quarrying and refuse dumping and, although some alluvial clays were encountered, no features of archaeological interest were present.

METHODOLOGY

Following the principles of preservation *in situ* (Department of the Environment 1990), where practical the excavations at both sites were limited to the areas where surviving archaeological deposits would be severely impacted on by the proposed development. This often resulted in relatively small and discontinuous areas being examined. Although the remaining archaeological deposits have been preserved for examination at some later date, the piecemeal nature of the present investigations has presented problems in the interpretation of some of the features and phases of activity identified. The nature of the programme also resulted in many of the trenches being investigated at different times and, even when adjacent trenches were open at the same time, it was often impossible to

view the trenches together. This frequently made it difficult to establish relationships between features in different trenches or permit anything more than basic interpretations whilst in the field. This has resulted in the nature, phasing, and often the potential importance of many features only being recognised during the post-excavation programme. In addition, and also in keeping with English Heritage's guidelines, many of the larger features were only partially excavated and this, combined with the general lack of stratigraphically associable features and the generally low quality and quantity of datable finds excavated, has resulted in many of the individual features remaining undated. Therefore, discussion of the limited artefactual and stratigraphic evidence will show the broad development of the landscape over time but cannot demonstrate exact chronological relationships between all individual features.

A note on the prehistoric pottery from Edmonton

Small quantities of mostly small and fragmentary sherds of pottery were examined by Alex Gibson (2000a and 2000b). The examination revealed that they were generally featureless and/or undecorated; identification was tentative and

undertaken on fabric alone. None of the sherds was sufficiently diagnostic to warrant illustration. Nevertheless, possible Earlier Neolithic material, comprising a black to brown fabric with quartz sand inclusions, was present which, if identified correctly, would indicate a manufacturing date of around 4000–3000 BC. Other sherds, varying in colour from grey to reddish brown and containing crushed calcined flint inclusions, were also recovered, which, in the absence of diagnostic forms, could only be dated to the later second or first millennium BC.

GEOLOGY AND TOPOGRAPHY

Montagu Road and Plevna Road lay approximately 400m and 1000m respectively west of the River Lea floodplain in areas now fully urbanised. The level on the top of natural terrace deposits at Plevna Road sloped down from 12.14m OD in the north-west to 11.23m OD in the south-east, and at Montagu Road from 10.34m OD to 9.31m OD, again from the north-west to south-east.

The most prominent topographical feature of the area remains the River Lea; this is the largest of the tributary rivers of the lower Thames and in the London region its floodplain is seldom less than 800m wide (Gibbard 1994, 109). In the Enfield area, the western margins of the lower Lea Valley comprise wide Pleistocene gravel terraces frequently capped by brickearths of the Enfield Silt Deposit; further to the west London Clay and other Tertiary deposits become predominant. In the London region, the Lea appears to have experienced an eastwards migration that has resulted in a steeper eastern valley side, composed predominantly of London Clay. The whole area to the west of the Lea is dissected by numerous shallow river valleys, generally showing a west to east drainage pattern; these formed throughout the Pleistocene, and many of them continued as prominent features throughout much of the prehistoric and historic periods. Recent water management and urban development have meant that most streams have been diverted, canalised, or culverted, and little evidence of original drainage patterns is now evident.

Pleistocene deposits along the western side of the floodplain primarily consist of Devensian Leyton Gravels, a Lea equivalent to the lower Thames East Tilbury Gravels or middle Thames Kempton Park Gravels. Immediately to the east of Plevna Road, the gravels and brickearths are

blanketed by alluvial deposits thought to be of late Glacial or Holocene age; alluvial deposits probably continued to form until recently when canalisation, water management, and the construction of a series of large reservoirs precluded the Lea from flooding. Beneath the floodplain alluvium, organic plant-bearing beds containing cold climate or full glacial plant assemblages are present; known as the Lea Valley Arctic Bed or Ponders End Stage, these have been dated to c.21–28,000 BP. These were first identified at Pickett's Lock, immediately to the north-east of Montagu Road, and may equate with, or pre-date, the Shepperton Gravels of the Thames Valley. As their exact relationship is uncertain, they have been termed Lea Valley Gravels (Gibbard 1994, 109).

Locally, the Montagu Road site lies on the Lea Valley floor on Warren's low terrace, which is situated c.1–2m above the contemporary floodplain of the Lea. Its immediate underlying geology would appear to consist of Leyton Gravels, overlain by silty-sandy gravels, probably equating with the Lea Valley Gravels, and capped with Enfield Silt deposits. At Plevna Road Enfield Silt deposits were observed to overlie brownish sands and gravels. It was not possible to excavate fully through the terrace sequence to establish whether these represent the Leyton Gravels or the Lea Valley Gravels. Immediately to the south of Plevna Road, running west–east and continuing towards Montagu Road before sharply diverting to the south, is Salmon's Brook, once one of the principal tributaries flowing from the west into the Lea. This stream has now been rerouted, canalised, and partially culverted, although it still appears to follow the course of an earlier channel.

Palaeolithic handaxe

The earliest indication of human activity recorded during the excavations was a handaxe recovered from a Neolithic or Bronze Age ditch at Plevna Road; this forms the subject of a separate paper (Bishop 2002a). It measured 115mm long, 86mm wide and 26mm thick, weighed 262g, and was carefully flaked, probably using a soft hammer, to produce a sub-triangular or cordiform shaped implement (Fig 2.1). Specifically, it has very close parallels with the distinctive *Bout Coupé* handaxe of the Middle Palaeolithic (Roe 1981, 252). Although the *Bout Coupé* has been questioned as a cultural or

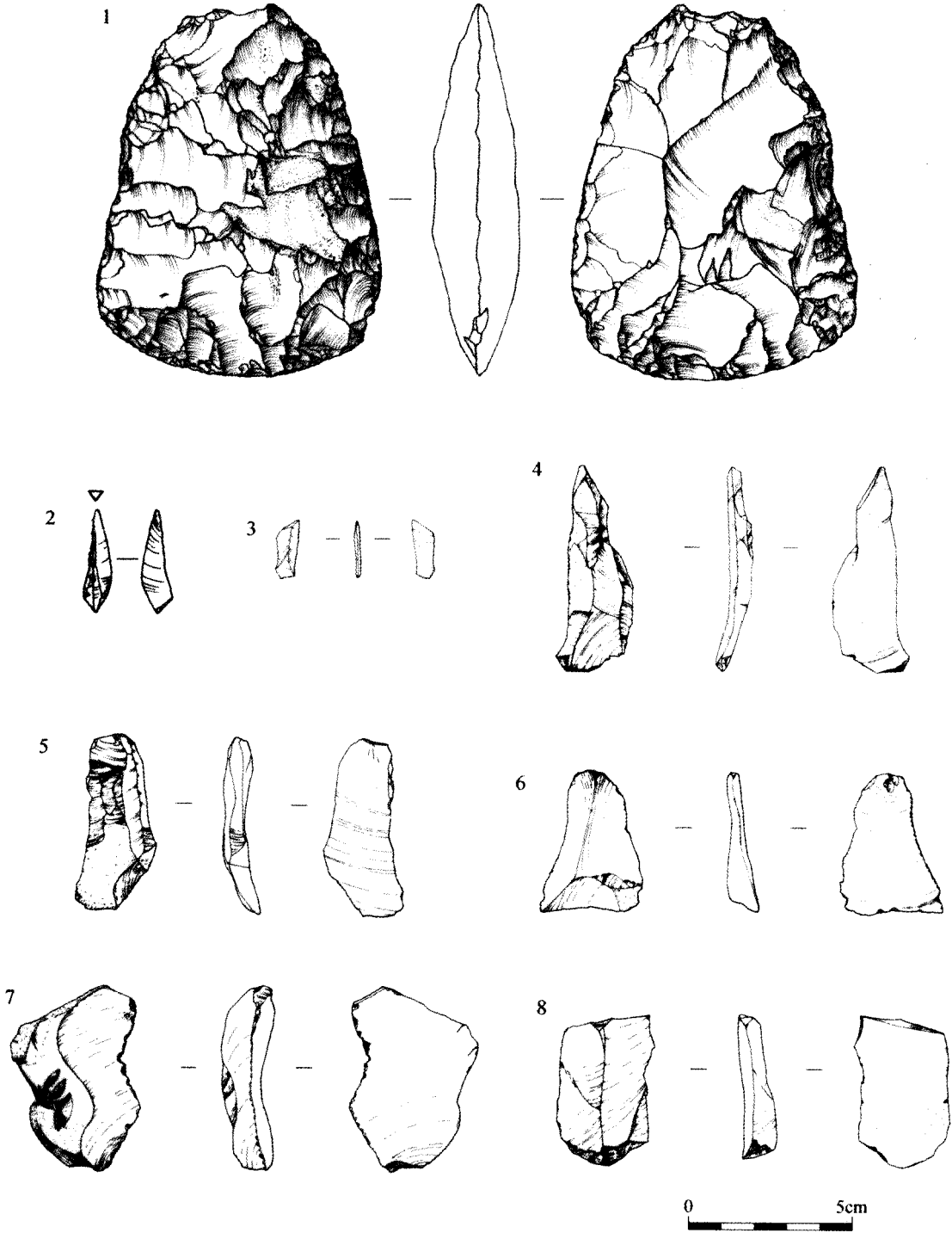


Fig 2. 2.1: Bout-Coupé handaxe; 2.2: microlith (MGU); 2.3: microlith (PVA); 2.4–5: burins; 2.6–7: serrated flakes; 2.8: long end-scraper

typological marker (Coulson 1986), the handaxe conforms to Tyldesley's (1987) rigid definition of the type. A recent survey of the *Bout Coupé* by White and Jacobi (2002), also emphasising the need for employing tight typological parameters, concluded that most of the rigorously defined *Bout Coupé* bifaces with reasonably secure provenances came from Devensian deposits, mainly from Middle Devensian OIS 3 contexts, and that many of the others either possibly or probably came from similarly dated contexts; this suggests a manufacturing date for this implement between *c.*60,000BP and *c.*30,000BP. However, White and Jacobi also warn that they cannot conclusively demonstrate that *Bout Coupé* handaxes only originate from Middle Devensian contexts, and that they 'should not be used uncritically as a Mousterian marker fossil' (2002, 123).

Although the possibility that the handaxe had been accidentally incorporated into the ditch fill cannot be entirely discounted, it was considered by the excavator to have been deliberately placed on the base of the ditch, and therefore may originally have been found at some distance from the site. The Quaternary deposits of the Thames Valley and its tributaries have provided a wealth of Palaeolithic implements and several earlier, Acheulean, handaxes have been recovered from the area, although no great concentrations have been identified. The handaxe could potentially have derived from the Leyton Gravels, the primary constituent of the gravel terraces in the area and thought to be of Devensian date. Alternatively, an origin from within the Lea Valley Gravels may be possible; they are highly fossiliferous, but have yielded few artefacts and their exact geological history is unknown. However, flakes attributed as Levalloisian in style have been found from similar deposits at Enfield Lock and Ponder's End, as well as from further north in the Lea Valley (Warren 1938). An assemblage containing Levalloisian flakes and at least one *Bout Coupé* handaxe has been identified at Creffield Road in Acton (Roe 1981, 216–18, 262), there associated with the Kempton Park Gravels.

LANDSCAPE DEVELOPMENT

Mesolithic and Neolithic activity

At both sites, the earliest confidently attested activity was represented by single microliths,

which, although recovered from later features, could themselves be dated to the Mesolithic period. The example from Montagu Road (Fig 2.2) comprises a finely worked, basally retouched type of 'Horsham' affinities, suggested as a transitional type datable to the middle of the Mesolithic (Ellaby 1987, 62). The fragment from Plevna Road (Fig 2.3) consists of a narrow, obliquely truncated type of Later Mesolithic affinities (Switsur & Jacobi 1979). To these may be added a number of cores, blades, and possibly other tools found scattered across the two sites, including burins, serrated flakes, and a long end scraper (Fig 2.4–8). The presence of microliths and other flintwork may indicate intermittent and sporadic activity over a considerable period during the Mesolithic.

The earliest evidence of actual landscape change at both sites consisted of numerous tree-throw hollows. The identification of some of these was problematic as, although some were clearly tree-throws, it was occasionally difficult to differentiate between the more regularly shaped tree-throw hollows and bush and shrub clearance from deliberately cut but heavily weathered pits. At Plevna Road at least 13 tree-throw hollows could be confidently identified (Fig 3) and over 70 were recognised at Montagu Road (Fig 4). They varied in size from 1m to nearly 5m in maximum dimension and, of those excavated, the root systems could be traced for up to 0.8m in depth. Some of the smaller examples were sub-circular in shape and probably indicate deliberate bush and shrub clearance, whilst many of the larger ones were ovoid or semi-circular, probably indicating the up-cast from fallen trees (*eg* Moore & Jennings 1992, fig 6).

Several of the hollows contained *in-situ* lenses of charcoal, small quantities of burnt flint and other indications of burning, which may suggest the use of fire to burn the fallen trunk and separate it from the root system. Only one from Plevna Road contained any struck lithics — a transverse core rejuvenation flake, broadly datable to the Mesolithic or Neolithic periods. A tree-throw hollow from Montagu Road contained an assemblage of four blades, three flakes, and two core rejuvenation flakes (Fig 5.9–10) that were all in a sharp condition and, although not refitting, probably originated from the same nodule. Another tree-throw hollow contained four flints in sharp condition, also almost certainly originating from a single

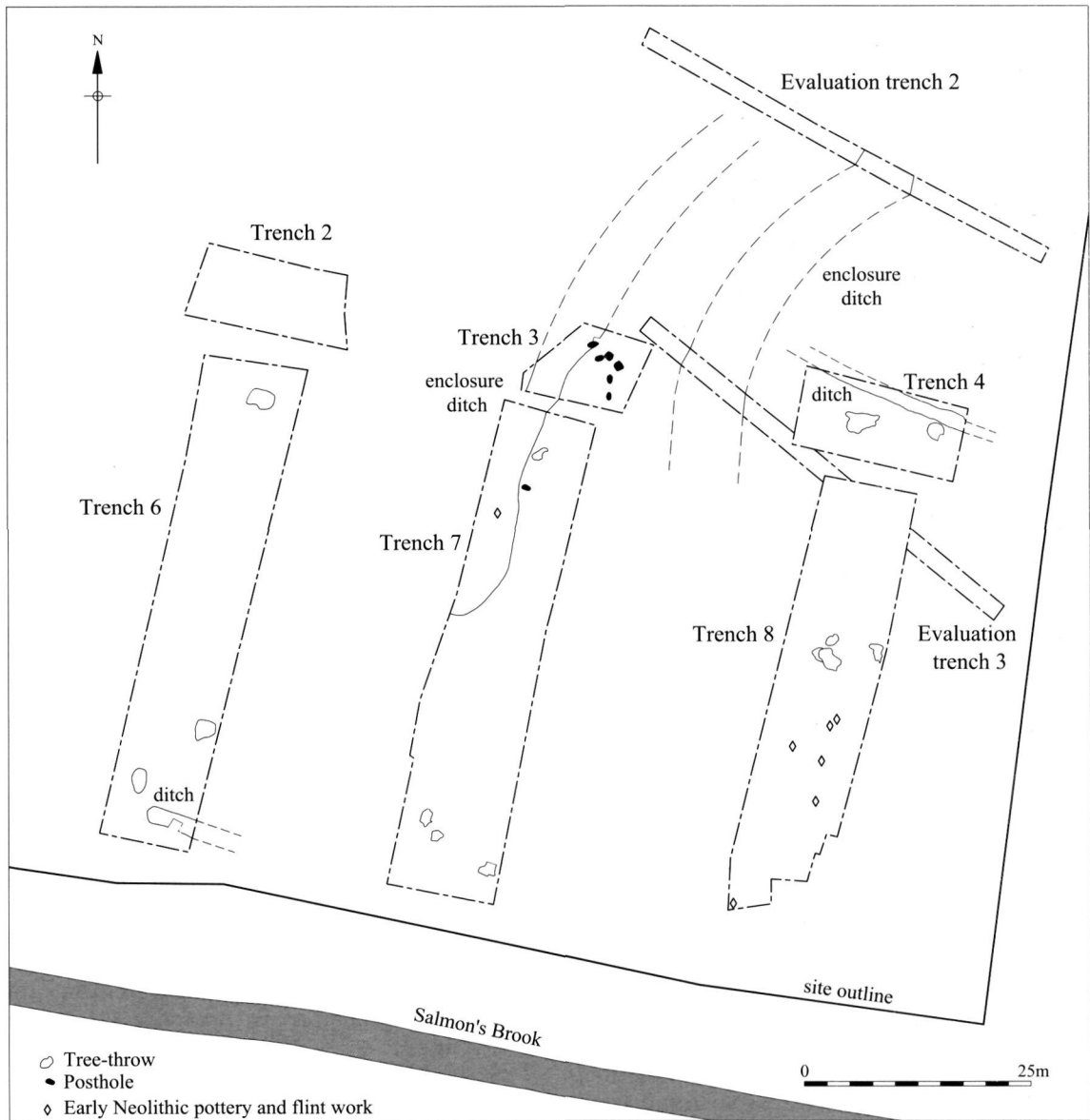


Fig 3. Plevna Road: tree-throw hollows, parallel ditches, enclosure ditches and post arrangement

nodule. Both of these assemblages would be most consistent with Mesolithic or Early Neolithic industries. Struck flints were recovered from a further 10 tree-throw hollows at Montagu Road. These were generally undiagnostic, although the high proportion of blades and core rejuvenation flakes present would suggest that at least some dated to the Mesolithic or Early Neolithic (Fig 5.11–14). Only one hollow

contained pottery — a small sherd from a vessel identified as probably Early Neolithic in date. Where stratigraphic relationships existed, the clearance hollows at both sites could be shown to pre-date any deliberately cut features, indicating that at least some clearance occurred prior to any other development of the landscape. There was no direct evidence at either site for deliberate contemporaneous clearance however,

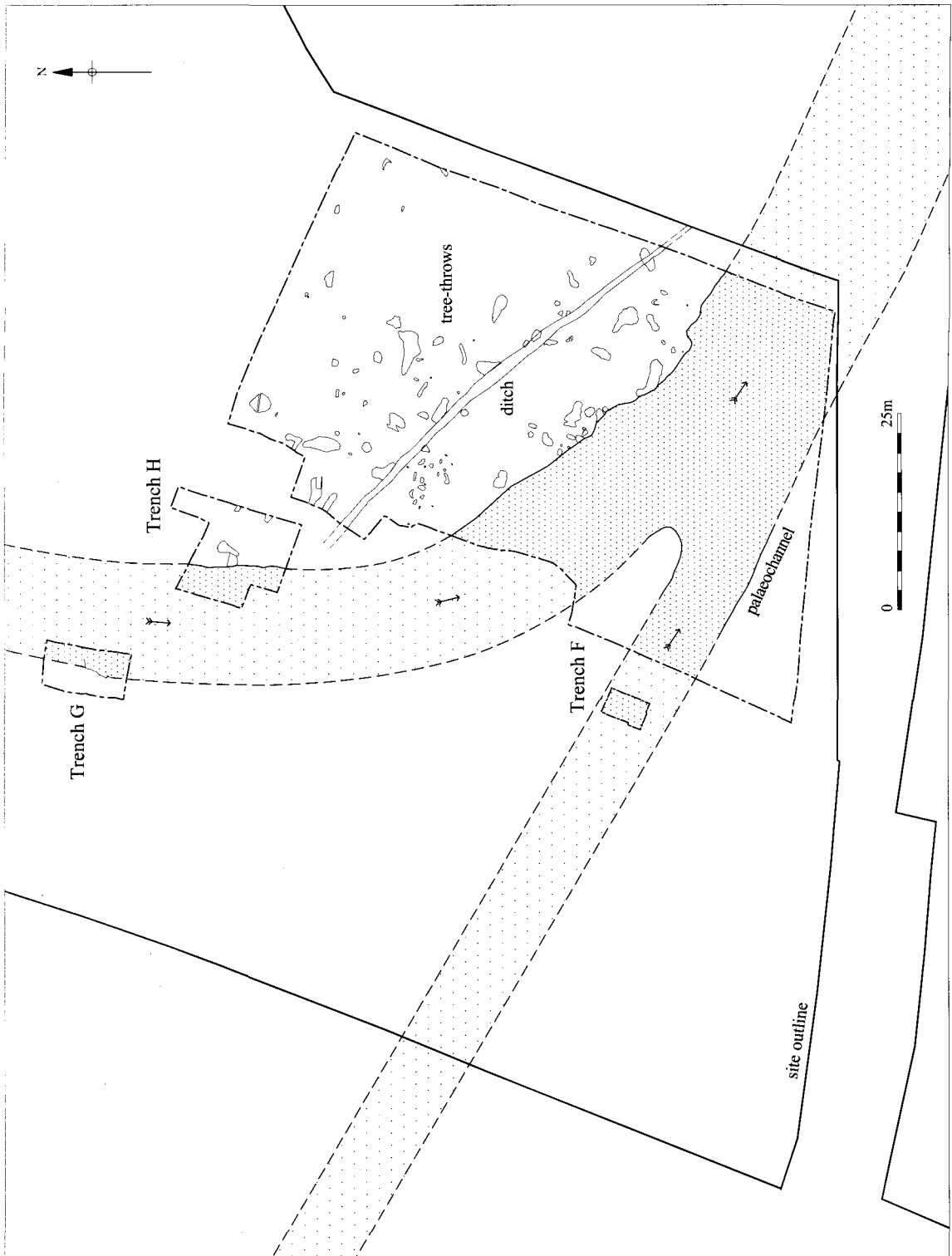


Fig 4. Montagu Road: tree-throw hollows, ditch and palaeochannel



Fig 5. 5.9-10: blades; 5.11-12: core rejuvenation flakes; 5.13-14: blades; 5.15: burin; 5.16-17: utilised blades; 5.18: utilised flake; 5.19-20: core rejuvenation flakes

and regrowth may have occurred with small-scale clearances successively undertaken over a long period.

Several of the hollows created by fallen trees appeared to have been used, possibly as temporary shelters, and, along with traces of charcoal and burnt flint, several also contained struck flint, some indicative of *in-situ* knapping. Evans *et al* (1999) have suggested that such hollows may have served as important landscape markers and settlement foci during the Mesolithic and Neolithic, when it is assumed that much of the country was still blanketed by dense woodland. Such hollows would also provide ideal temporary shelters for activities such as flint knapping, and it has been suggested that on gravel terraces hollows created by fallen trees could provide easy access to lithic raw materials (Bagwell *et al* 2001).

Palaeochannel

Running through the centre of the site at Montagu Road were several elements of a large drainage system (Fig 4). These cut into natural brickearth and, in some cases, truncated or eroded tree-throw hollows. The largest channel was aligned roughly north-south along the western edge of the site but curved around before continuing towards the east. It was recorded for a distance of 110m, with the larger element being approximately 15m wide and 1.6m deep. This merged with a shallower channel to its south, being initially separated by a gravel bank, forming a watercourse up to 20m wide. Smaller channels were also recorded to the west and south, and together these represented a complex, braided and shifting drainage system, generally draining towards the south-east.

Filling the lower levels of the larger channel were coarse sands and gravels indicating an early period of turbulent fluvial activity. Later fills appear to represent calmer activity with pooling occurring. Sedimentary analysis (Green *et al* 2000) suggested that the flow was intermittent, with rapidly flowing water occurring for at least a short period during the earlier stages of its existence. The accumulation of finer grained, structureless, clayey sediment in the upper fills of the main channel and throughout the smaller channels represents a change in the waterflow regime. This material was probably mostly of colluvial origin but possibly

included some deposition by floodwater. These sediments had been substantially affected by pedological processes, representing the eventual restabilisation of ground surface conditions. Similar deposits also covered the site, sealing the tree-throw hollows and indicating substantial, although probably intermittent, flooding events and channel overbanking across the site. These and later flood deposits suggest that the drainage pattern was persistent, the main channel probably continuing as a seasonally affected stream or marshy brook throughout much of the prehistoric period.

Radiocarbon dating of the earlier fills of the main channel indicates that it had formed prior to 2885–2605 cal BC (Beta 137883; 4170±40BP), during the Neolithic period. If the channel's formation preceded this by only a short period, then its initial strength of flow may reflect land degradation associated with woodland clearance as represented by the numerous tree-throw hollows. Human activity adjacent to the channels, at least during the calmer periods of flow, is testified by the presence of charcoal and occasional struck and burnt flints, as well as a few fragmentary pieces of pottery of a possible Early Neolithic date, within the channel's upper fills.

NEOLITHIC FEATURES

Parallel ditches

Two of the apparently earliest deliberately cut features consisted of ditches that ran parallel to the present course of Salmon's Brook at Plevna Road (Fig 3). Although they were only revealed for short stretches, they appeared to be parallel, approximately 70m apart, had a relatively high cultural material content, and were on a slightly different alignment to any of the other ditches identified at that site. They were between 1.70m and 2.02m wide and 0.59m and 0.78m deep, both being 'U'-shaped in profile with wide, flat bases. The southern ditch terminated to the west with a slightly rounded end. Both were filled with material similar to the underlying geological deposits, although the fills of the southern ditch suggested a period of primary silting prior to deliberate backfilling. Its primary fill contained a small quantity of burnt flint and a flint scraper, while the backfill contained over 2.5kg of burnt flint, a burin, and several utilised blades and flakes (Fig 5.15–18). The fill of the northern ditch contained nine sherds of probable Early

Neolithic pottery as well as other unidentifiable pottery sherds, a relatively large quantity of mostly undiagnostic struck flints, nearly 1.5kg of burnt flint, and fragments of burnt daub. The relative high quantities of cultural material present within the ditches compared to all other features identified suggest the possibility of some form of deliberate disposal; the pottery suggests this occurred between 4000 and 3000 BC.

A north-west–south-east aligned ditch, at least 44m long by 1m wide and up to 0.43m deep, truncated several of the tree-throw hollows and appeared to respect the curve of the main palaeochannel at Montagu Road (Fig 4). The ditch was filled with a sandy silt-clay of probable alluvial origin, although it was uncertain whether this was caused by *in-situ* silting of the ditch or from overbank flooding of the adjacent channel. Recovered from the fill were small quantities of pottery of probable Early Neolithic date and a small assemblage of burnt and struck flint. The struck material was mostly undiagnostic, although the presence of several blades and blade cores (Fig 5.19–20) would be consistent with the suggested date of the pottery, indicating that, like the ditches at Plevna Road, it was backfilled around 4000 to 3000 BC.

Curvilinear ditches

Another early feature at Plevna Road comprised a large ditch with a rounded butt-end. It was between 3.60m and 4.60m wide with concave sides and a slightly concave base, and varied in depth from 0.60m to 0.69m. It could be traced for at least 36m, although it did not reappear in evaluation Trench 2, c.70m north-east of its terminal (Fig 3). Parallel to it, and located approximately 10m to the east, was a further ditch. It was only recorded in two of the evaluation trenches, but appeared to be at least 30m long, and was 8.50m wide and up to 0.75m deep, with concave sides and an undulating base. No evidence of recutting could be discerned, although the rather irregular shape in plan of the western ditch may tentatively suggest that it was initially cut in segments. The depositional history of the ditch fills is far from clear; both had primary fills which may have been waterlain, and in one of the sections of the western ditch a secondary fill may suggest the remnants of a collapsed bank, eroding into the ditch from the west. Their upper fills may indicate either natural silting or deliberate backfilling and levelling.

Apparently deliberately placed near the terminal of the western ditch, prior to any primary silting and presumably shortly after the ditch's construction, was the Palaeolithic *Bout Coupé* handaxe (see above). The only other finds from its lower fills consisted of a few fragments of burnt flint, although small quantities of struck flint of Later Neolithic or Bronze Age characteristics and a single abraded sherd of Iron Age/Romano-British pottery were recovered from the uppermost fill. The eastern ditch produced several sherds of Early Neolithic carinated bowl(s), a single abraded sherd of Late Bronze Age pottery, and a serrated flint flake.

Dating the construction of these features is problematic. They would appear to be associated, by both their unusually large size and their parallel alignment. The only artefact from the lower fills of the western ditch must substantially pre-date its construction, while lithic material from the upper fills suggests that it had largely silted up by the Bronze Age. The most plausible date for the construction of the eastern ditch, as indicated by the majority of the pottery, would be during the Early Neolithic. Individual fragments of later pottery were also present in each ditch, but in both cases they had been substantially degraded, and may have entered the ditch fill intrusively through activities such as ploughing, presumably after surface traces of the ditch had all but disappeared.

Post arrangement

Scattered beside the western ditch, and in one case cutting its fills, were six large postholes (Fig 3). They were remarkably regular, varying between 0.80m and 1.00m long by 0.50–0.60m wide, and between 0.47m and 0.55m deep. No dating evidence was recovered from any of them, although a transverse arrowhead of Later Neolithic date was recovered from the soil horizon in the vicinity, as well as other struck flints of similar date (Fig 6.21–3). Assuming these were all associated, stratigraphically they post-date the large ditches but pre-date a smaller field boundary ditch of later Bronze or Iron Age date (see below).

The postholes would appear to represent an arrangement of substantial timber uprights, although no coherent ground plans could be discerned. They were in a roughly linear arrangement, aligned north–south, although two were located slightly to the west of this. If

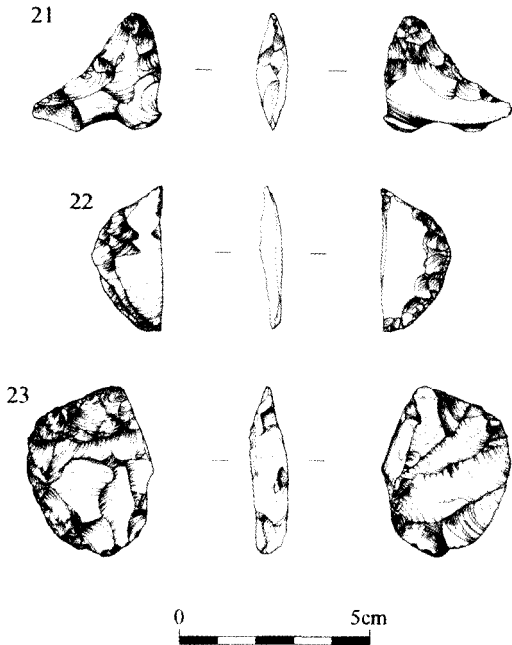


Fig 6. 6.21: transverse arrowhead; 6.22–23: bifacially retouched implements

a similarly sized pit to the south was included a near perfect circle, *c.*22m in diameter, could be conjectured, although many other arrangements would be possible and they are perhaps more likely to have been ‘randomly’ positioned. The size of the postholes and their arrangement, as well as a paucity of domestic rubbish in the vicinity, would appear to preclude a function as a purely ‘domestic’ type structure, such as a roundhouse. They were quite substantial in size and, in the absence of any obvious ‘domestic’ interpretation, it is possible that they represented some form of ceremonial marker or structure. Again, due to the small areas excavated and the lack of securely associated finds, any such interpretation must be regarded with caution.

Agricultural features

The remainder of the prehistoric features identified consisted of postholes, pits, ditches and smaller gullies, features most characteristically associated with agricultural and settlement-type activities. The dating evidence that was recovered would suggest that they could mostly be assigned to the Middle to Late Bronze Age or Iron Age.

Virtually all the features were recorded at Plevna Road (Figs 7–8), with only boundary

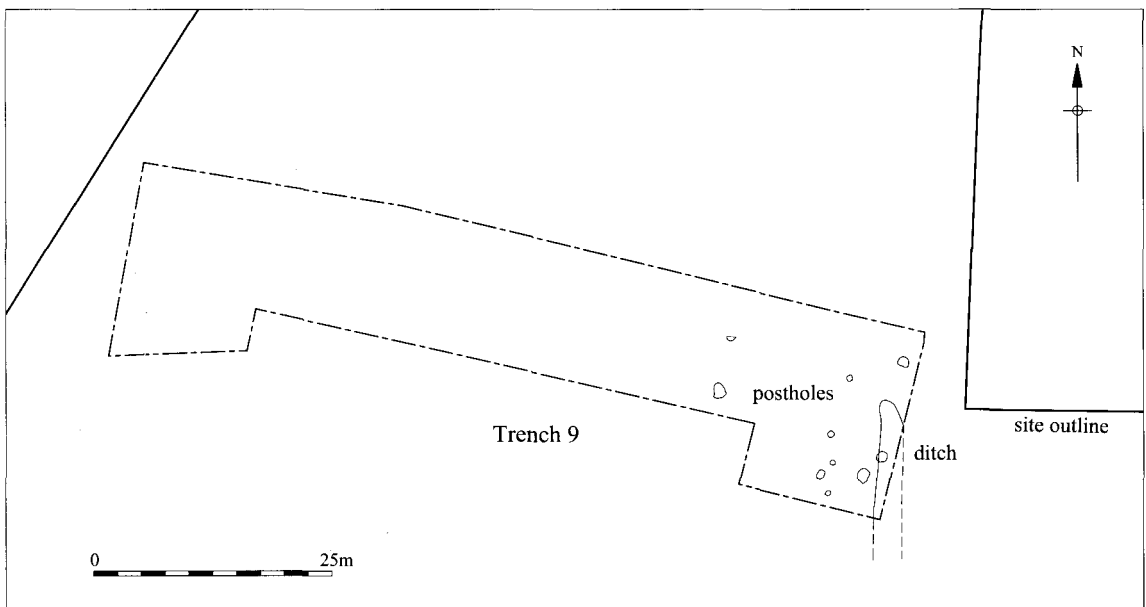


Fig 7. Plevna Road: ditch and postholes

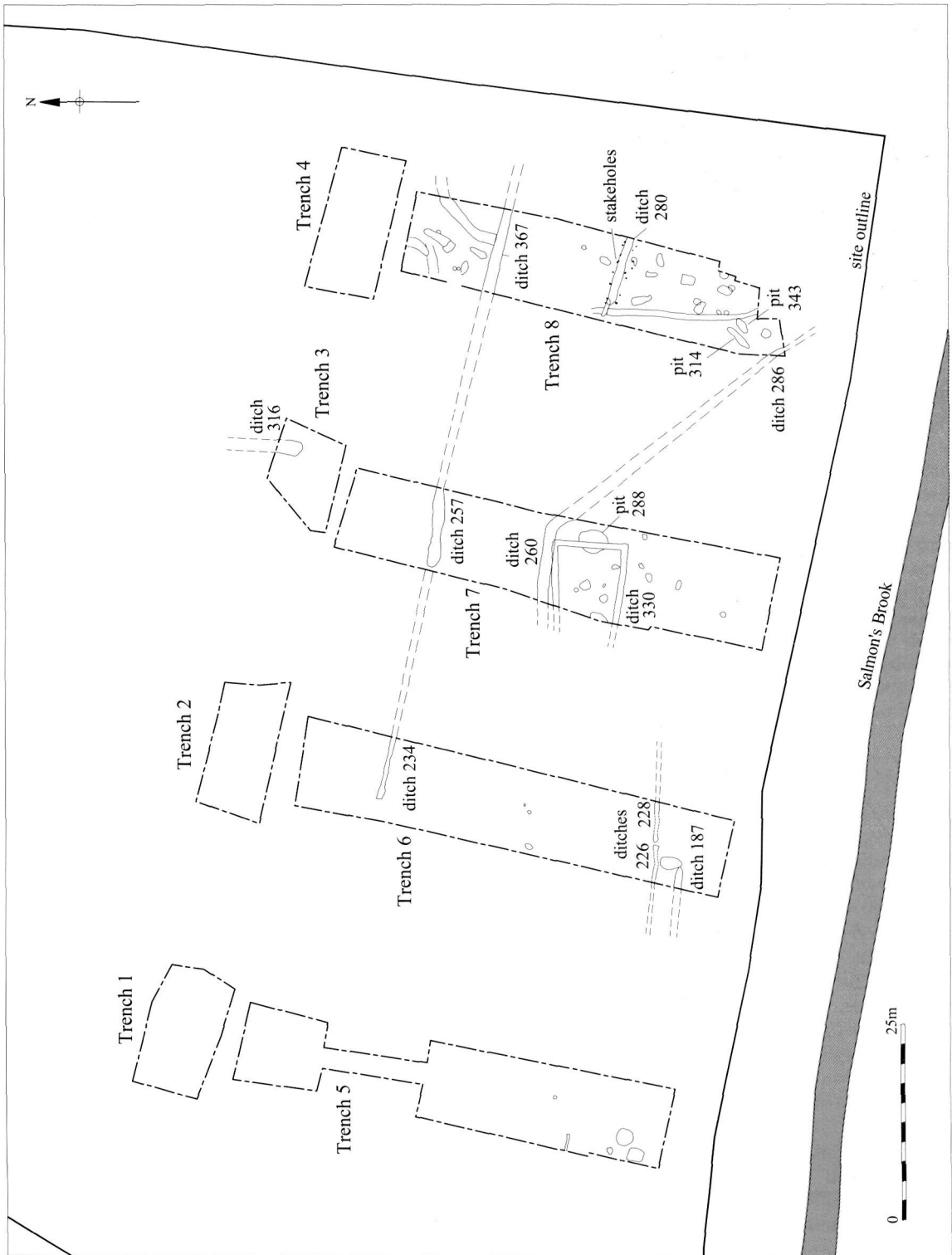


Fig 8. Plevna Road: settlement features, ditches, and pits

ditches being identified at Montagu Road (Fig 9); any more intensive occupation here would presumably have been severely limited due to the periodic flooding apparent throughout most of the prehistoric period. At Plevna Road, situated on a slightly higher elevation than Montagu Road and where flooding appeared to have been less of a problem, more diverse activities could be discerned. Despite the number of features identified, the relatively long period of potential occupation would not suggest very intense activity, although it was not possible to ascertain how many features were concurrent at any particular time; moreover, few obvious structural features could be identified, a problem often encountered on later prehistoric settlement sites.

Pits

Twenty-one pits were identified, although a few of the smaller pits may actually have represented weathered postholes, and some of the more irregularly shaped pits may actually have been small tree-throw hollows. However, the majority had well defined, steep sides and flat bases, were ovoid or sub-rectangular in shape, and measured an average of 1.70m long by 1.00m wide and 0.35m deep. They were mostly filled with material similar to the underlying geology, although several contained darker more clayey primary fills, suggesting that some at least had remained open for some time before being back-filled.

Although a comprehensive environmental sampling programme was undertaken, only in one pit had any significant plant remains survived and this contained seeds indicative of a disturbed ground environment, including stinging nettle (*Urtica dioica*), fat hen (*Chenopodium album*), and celery-leaved crowfoot (*Ranunculus sceleratus*). This latter species grows in muddy ditches and shallow ponds that are mineral rich, confirming that this pit at least had remained open for some time and had become waterlogged in its base (Carruthers 2000).

Few finds were recovered; approximately two-thirds of the pits contained nothing at all, whilst the others mostly contained a few struck or burnt flints and small pottery sherds. The datable fragments of pottery recovered suggested that the pits had been dug throughout the Late Bronze and Iron Ages, and most of the struck flints recovered would be consistent with such dates. Three pits, however, contained small quantities of struck flint of Mesolithic or

Early Neolithic affinities (see above). Associated pottery evidence suggests that these flints had entered the pits residually, but, interestingly, these pits were all located close to each other towards the south-eastern part of the site, and may reflect a focus of earlier activity.

The function of the pits remains enigmatic; the general paucity of artefacts and faunal remains appeared to preclude interpretations as simple rubbish pits, although organic remains did not generally survive the soil conditions of the site. Ovoid or rectilinear pits of a similar size to many of the examples excavated at Plevna Road were recorded from a later prehistoric settlement at the Buttsbury Estate, to the east of the Lea Valley (Lawrence *et al* 1997). Similarly, few finds were present and no diagnostic usage could be suggested, although they were thought to respect a boundary such as a fenceline. A possible alignment may be discerned from a roughly linear row of six pits aligned north-south in Trench 8, crossing the line of a ditch interpreted as a field boundary. Similar sized and shaped pits, sometimes roughly aligned in rows, were also recorded at Reading Business Park. Again, most of these contained little or no artefactual material and it was suggested that they were designed, at least primarily, for grain storage, although no carbonised grains were recovered (Moore & Jennings 1992, 27–8). Similar pits recorded at Aldermaston Wharf were also considered to have had a primary function as grain stores, although many appeared to have been subsequently utilised for the disposal of rubbish (Bradley *et al* 1980, 221–8).

Although the general paucity of finds makes it difficult to ascribe a function to most of the pits, one example, Pit [314], did produce large quantities of burnt flint as well as a crudely struck flint flake. This pit was long and narrow with stepped sides, measuring 3.70m by 0.90m and 0.38m deep. It is possible that this represented a cooking pit or trough; the lack of evidence of burning to its sides suggested that it might have contained water, which was heated by the insertion of hot pebbles. An adjacent pit, [343], also had stepped sides and contained smaller, but still relatively large quantities of burnt flint, and this may have served a similar function. It had been truncated by a later ditch but was likely to have also originally been relatively long and narrow. Pits interpreted as having a cooking function have now been identified at several locations within the London area, almost all

of which were adjacent to sources of water (eg Bowsher 1991; Tucker 1996; Heard 2000), and a possible ploughed-out burnt mound has been recorded close to the Turkey Brook, a tributary of the River Lea north of Salmon's Brook (Brown & Cotton 2000, 86). Another pit, [288], was noticeably larger than the others, measuring 3.40m by 2.95m and was 0.78m deep with stepped sides; this may have functioned as a well or sump, an interpretation offered for other large pits from comparable sites, such as Prospect Park near Heathrow (Andrews 1996a, 21).

Postholes

Altogether 25 postholes were identified at Plevna Road. These were spread throughout the site but, as with the pits, tended to concentrate towards the south-east of the site. They were sub-square to circular in plan, mostly with vertical sides and flat bases, and averaged about 0.50m in diameter. No definite postpipes were identified, and the original posts may have been removed once redundant. A few larger examples, up to about 1.00m in diameter, were recorded, and these tended to have rather irregular sides, suggesting that they had either weathered or partially collapsed, probably after the post was removed. As already noted, organic preservation was very poor on the site and biological reworking may have removed traces of any *in-situ* post remains.

In the north-east of the site, a series of postholes formed an approximate north-south alignment, possibly representing a fence-line or boundary marker, parallel with a ditch, located c.5m to its east (Fig 7). No other coherent spatial patterning could be suggested nor structures identified, although this may not be surprising considering the limited areas excavated and the difficulty in archaeologically recognising such features when their fills closely resembled the underlying geological deposits.

At Montagu Road two postholes were identified (Fig 9). These both measured 0.25m in diameter and were 0.15m deep. It was uncertain how these related to other phases of activity identified; no dating evidence was recovered from either of them, although one of them cut the ditch parallel to the palaeochannel and was partially truncated by a field boundary ditch.

Ditches

In addition to the pits and postholes, 19 ditches

were identified at Plevna Road. These varied considerably in size, and although the original lengths could rarely be ascertained due to the limited areas examined, some were clearly relatively short. It is likely that they fulfilled varying functions: some, especially the narrower examples, may have acted as gullies to drain water away, whilst the larger examples may have served as boundaries, possibly delineating fields, routeways, or settlement areas. Consideration of their sizes did not provide a clear-cut means of associating any of them or suggest obvious functional classes, as the ditch sizes, which varied from 2.00m to 0.39m in width and from 0.13m to 0.60m in depth, graded gradually from the smallest to the largest. Some stratigraphic relationships could be demonstrated and some of the ditches may be associated by similarities in their alignments, although few coherent structures and no clear patterns of development could be discerned.

Stratigraphically the earliest sequence of ditches consisted of four in the north of Trench 8. All had 'V'-shaped profiles and were relatively small, varying from 0.90m to 1.40m in width and 0.26 to 0.53m in depth. They were curvilinear in plan and appeared to have been relatively short, although no obvious function could be ascertained. A straighter stretch of ditch in the south of the trench, measuring 0.56m wide by 0.19m deep and traceable for over 24m, may have represented a drainage gully.

Field system

Some of the other ditches may have formed elements of a field system. These were relatively substantial, between 1m and 2m wide, and mostly 'U'-shaped in profile with flat bases and steep sides. Ditches [367] and [257] may have formed a long boundary at least 46m long, with Ditch [234] possibly continuing this boundary further to the west. Perpendicular to this axis, but approximately 18m to the north, was Ditch [316]. It terminated to the south, possibly forming a gap or entranceway, and although it truncated the earlier pit arrangement (see above), it may have respected its position.

Ditch [280] had 17 stakeholes arranged along both of its edges after it had at least partially silted up. These may represent a fenceline demarcating the ditch, or a later boundary respecting the ditch's alignment after it had gone out of use. On a similar alignment was

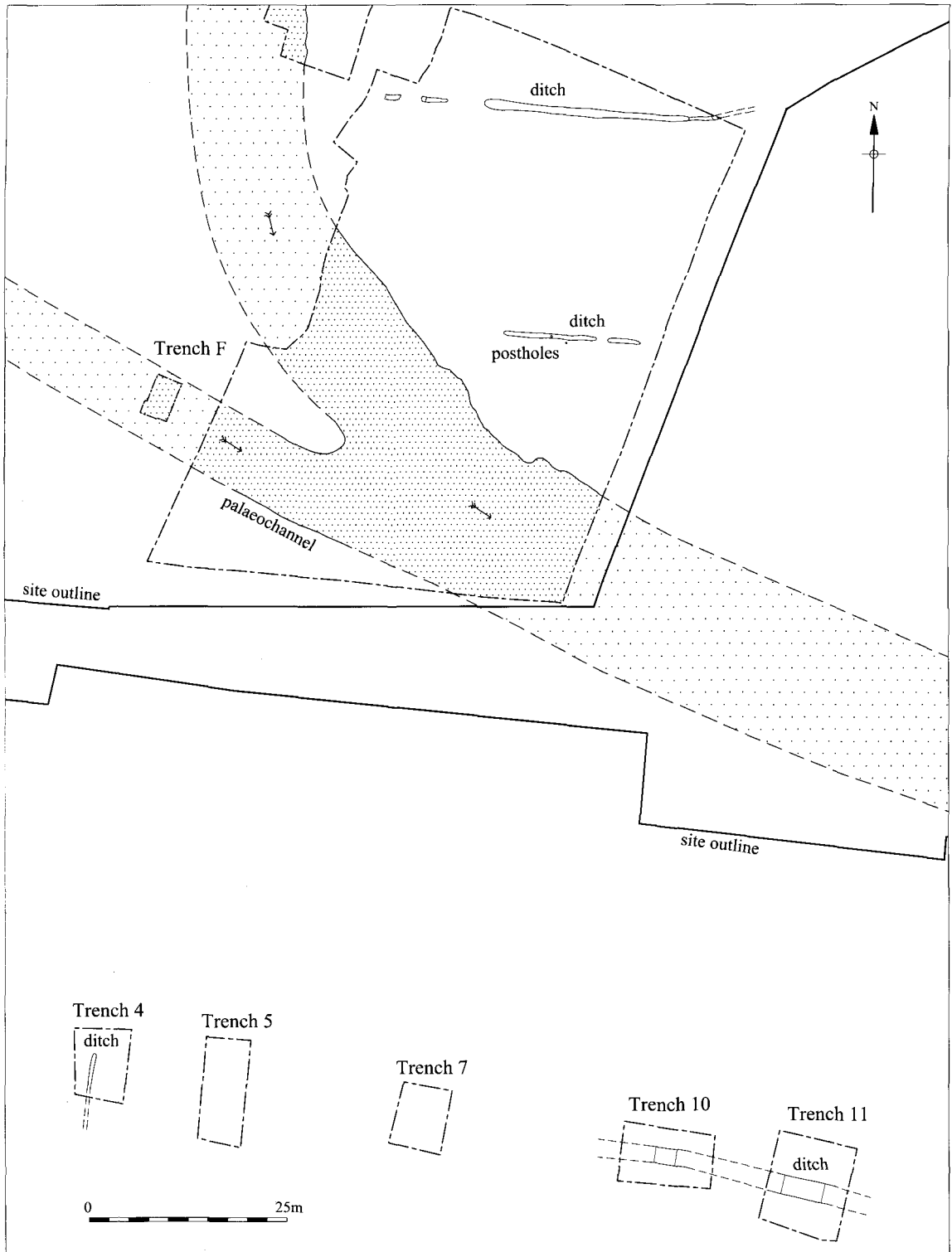


Fig 9. Montagu Road: field boundary ditches

Ditch [260]. This continued west beyond the limits of excavation, and may have continued eastwards as Ditch [286], part of which was recorded in the south-west corner of Trench 8. If so, and in conjunction with the long boundary to its north, it would have formed a large funnel-shaped feature, perhaps to confine the movement of livestock towards the west. Similar attempts at livestock control have been recorded at Flag Fen (Pryor 1996). In Trench 9 to the north, a north-south aligned ditch with a rounded northern termination was recorded for a distance of 11.90m, possibly indicating that the field system continued at least this far (Fig 7).

Truncating the ditch parallel to the palaeo-channel at Montagu Road (see above) was a 17.4m long ditch on a different (east-west) alignment, constructed in two segments. Parallel to it and approximately 30m to the north was a further ditch, at least 42m long and consisting of a series of small ditch segments, the longest being about 3m. Recutting, and mostly obscuring its segmental nature, was a much longer stretch of ditch; this had rounded termini at both ends and measured 25.6m long by 1m wide and was 0.13m deep. The only cultural material recovered from these ditches consisted of occasional charcoal flecks and small quantities of burnt flint; however, all were very shallow, in places only 90mm deep, and had filled with alluvially deposited silt-clays, indicating that flood events may have resulted in severe horizontal truncation of the ground surface, probably not long after they were initially constructed.

Two further ditches, to the south of the main channel, at Montagu Road may also have been part of the same rectilinear system. Although only small areas were investigated, an east-west aligned ditch at least 23m long was recorded in two trenches. Following its silting, at least part of its eastern stretch had been cleaned out and a recut was evident. A dump of mixed gravel and sand was recorded immediately to its south which may represent a bank or up-cast from its construction. A smaller north-south aligned ditch with a northern terminal was also identified further to the west. Other than small quantities of burnt flint, the only artefactual evidence recovered from these ditches consisted of a sherd of otherwise undiagnostic prehistoric pottery.

The similarities in profiles and their co-axial alignments suggest that these ditches were all associated, although their precise roles were

difficult to elucidate. They may have formed part of a ditched rectilinear field system or stockyard, or alternatively the northern parallel ditches may have formed the boundaries of a wide driveway leading from higher ground to the main channel, which was likely to have remained a dominant feature of the landscape.

Smaller enclosures

The stratigraphically latest prehistoric features identified at Plevna Road included Ditch [330] in the southern part of Trench 7. This was 0.80m wide and formed the north, south and east sides of what would appear to be a small sub-rectangular enclosure. No entrances lay within the excavated area, and it was presumably entered via a bridge or from the unexcavated western side. On a very similar alignment in the southern part of Trench 6 were two east-west aligned ditches, [226] and [228], both terminating to form a possible narrow entranceway. Approximately 2.5m to the south of Ditch [226] was a similarly sized ditch, [187], on the same alignment and also terminating to the east. None of these ditches reappeared in either the north of the trench or any of the adjacent trenches, suggesting that they may also have formed a small enclosure, possibly double-ditched, continuing to the south.

Abandonment

At Montagu Road, continued flooding resulted in the formation of deposits of silt-clay alluvium, interspersed with small channels, across the site. From these were recovered small quantities of Middle to Late Bronze Age pottery and struck flint datable to the Mesolithic to the Later Bronze Age/Iron Age. Some of these artefacts may indicate continued, low-key, activity during the later periods, although others had evidently been residually incorporated from earlier land surfaces and features. There is no further evidence of activity at the site until the late medieval/post-medieval period, when small quantities of pottery were incorporated into a soil horizon that had developed across the site. Similar soil horizons also formed at Plevna Road, sealing all of the features discussed above, and it is likely that both sites were either abandoned or used for archaeologically invisible activities such as pasturage, and then probably only seasonally and when ground conditions were appropriate.

A general increase in wetter conditions by

the end of the Bronze Age would have had a significant effect on settlement patterns, and widespread abandonment of the floodplains and low-lying areas has been observed throughout the Thames Valley (eg Meddens 1996). Other factors that may have influenced changes in settlement patterns and the economic system include a possible deterioration in the fertility of gravel terrace soils caused by acidification and erosion as a result of clearing the forest cover. This has been suggested for the Late Bronze Age settlement at Hornchurch (Guttmann & Last 2000, 351), and a switch to pastoralism has been suggested for the decline in archaeologically visible settlements and field systems on the west London gravels (O'Connell 1990, 54). Indeed, by the end of the Iron Age it appears that inroads start to be made on to the previously inhospitable London Clays and other poorly drained soils (Hawkins & Leaver 1999; Saunders 2000; Bishop 2002b), possibly encouraged by pressures caused by the abandonment of large tracts of lower-lying areas.

MEDIEVAL AND POST-MEDIEVAL ACTIVITY

Following the formation of soil horizons across both of the sites, the next evidence of activity consisted of a large pit dated to AD 1200–1400 and dug in the middle of the site at Plevna Road. Due to its isolation and the limited area

investigated, its interpretation is somewhat speculative, a brickearth quarry possibly being the most plausible explanation. The only other evidence of activity during the medieval period comes from a few sherds of pottery datable to AD 1080–1380, recovered from a later context in the north of Plevna Road. Plevna Road appears to have remained in either marginal or agricultural use until the 17th–18th centuries, when in the north of the site a succession of large ditches and a post-alignment were constructed (Fig 10). These may represent an individual's property boundary, although the persistence and substantial nature of the boundary may suggest that these formed the eastern boundary to Edmonton Village. They were parallel to and about 5m east of the line of Plevna Road, which itself may have respected the edge of the village.

To the east of this boundary were numerous large, roughly rectangular pits, measuring up to 10.50m by 8.50m by 1.30m deep, but rarely intercutting. Pottery recovered from their fills indicated that they were excavated from the early 18th century and throughout the 19th century. These almost certainly represent gravel and brickearth extraction quarries, and may reflect the increase in the rate of redevelopment of Edmonton during this time.

Following the formation of the soil horizon at Montagu Road, the site appears to have remained in agricultural or marginal use. Truncating most of the southern extents of the site were large

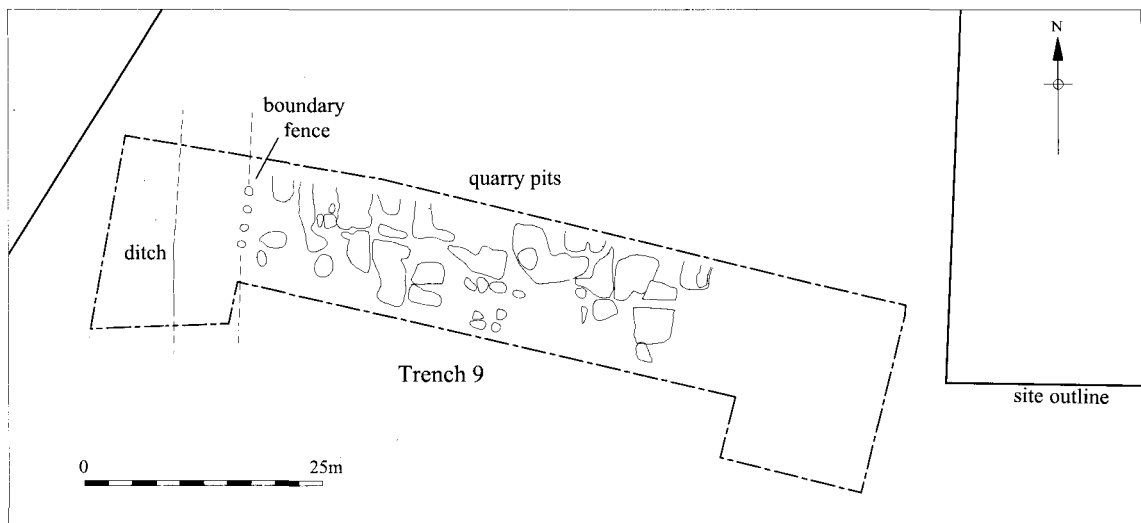


Fig 10. Plevna Road: medieval and post-medieval features

quarry pits, datable to the 19th–20th century. These had frequently been excavated to at least 3.0m below ground level, beneath the level of the impact of the proposed development and therefore the limits of excavation.

DISCUSSION: EDMONTON AND THE ARCHAEOLOGY OF THE LEA VALLEY

The excavations at Plevna Road and Montagu Road have provided an interesting glimpse of human activity in the lower Lea Valley over several millennia. Interpretations of the findings from the excavations must remain provisional and tentative, partly, at least, due to the limited areas investigated and the paucity of both artefactual dating evidence and stratigraphic relationships. Nevertheless, the data, although limited, do contribute to a reconstruction of this part of the landscape.

Unfortunately, the archaeology of the lower Lea Valley is poorly understood and no serious general accounts or syntheses have yet been compiled. Of the archaeological interventions that have occurred, the majority have been relatively small in scale and, although frequently demonstrating traces of prehistoric activity, tend to reveal small quantities of often poorly datable artefacts and isolated features, perceived as of limited interpretative value. Nevertheless a few, mostly recent and as yet unpublished, sites have produced more extensive information and, if the results of the smaller investigations are combined with these, a wider picture of settlement patterns and landscape exploitation may be proposed. Although this overview by necessity must remain a kind of ‘work in progress’, the desirability of even a preliminary framework is highlighted by the area’s likely future economic fortunes. The lower Lea traverses some of the most deprived areas of the London region, and its post-industrial landscape is likely to experience an unprecedented degree of urban rejuvenation in the near future, not least from major remodelling schemes such as those generated by the Olympic bid.

The excavations in Edmonton demonstrated that this area was visited by Mesolithic and Early Neolithic peoples who utilised the shelter provided by fallen trees and may have actively begun to clear the landscape of its forest cover — an activity which may have resulted in greater water run-off rates, channel formation, and erosion. This accords well with environmental

investigations undertaken in the vicinity (Bedwin 1991; Rackham & Sidell 2000, 21); these have indicated that the open, swampy conditions of the valley floor during the late Glacial were followed at first by the spread of pine woodland and then by temperate mixed oak woodland, with willow and alder carr present along the river margins. Large quantities of charcoal within the environmental sequences also suggested the possibility of natural or intentional woodland burning, and perhaps the presence of campfires associated with occupation along the river margins (*cf* Bennett *et al* 1990). Similar conditions were recorded at a comparable location in west London (Lewis *et al* 1992). Throughout this period patterns of settlement and resource exploitation would have significantly changed as post-glacial sea level rises resulted in the accumulation of alluvium across much of the valley floor, forcing settlement upstream or onto the valley sides (Lewis *et al* 1992, 244).

The lower Lea Valley has long been noted for its evidence of Mesolithic occupation (Lacaille 1961), some sites, such as Broxbourne in Hertfordshire, having produced important early assemblages (Warren *et al* 1934). Individual finds or small assemblages, similar to those recovered from Plevna and Montagu Roads, are known from many locations in and adjacent to the River Lea’s floodplain, the closest probably being Glover Drive, which included Early Mesolithic microliths (Greenwood *et al* 1997, 41), and Angel Road, where Mesolithic/Early Neolithic flintwork was recovered (Greenwood & Maloney 1993, 77). Slightly further afield, to the south of Edmonton, several sites in Hackney, on the western side of the River Lea (Lacaille 1961; Harding & Gibbard 1983), and at Stratford Market Depot, adjacent to the river on the eastern side of the valley (Wilkinson 1993), have revealed Mesolithic flint scatters, and this pattern continues throughout the valley. It is increasingly apparent that the valley was fairly extensively exploited during this period, the evidence probably suggesting short-term and activity-specific camps, exploiting the rich and varied ecological habitats within and adjacent to the floodplain.

Evidence for the clearance of the forest cover comparable to that recorded here can be found at various sites across the London region. A decline in the forest cover around 3800 BC is documented in the pollen record from West Heath (Greig 1992), whilst tree-throw hollows

containing Mesolithic flint have been identified in the Wandle Valley at Beddington (Bagwell *et al* 2001), and tree-throw hollows which pre-date Later Neolithic/Early Bronze Age occupation have been excavated along the margins of the Thames in Southwark (Ridgeway 1999; Proctor & Bishop 2002). Similar patterns of small clearances being opened along the river valleys during the Mesolithic and throughout the Neolithic have been observed in many parts of the British Isles. In the upper Thames 'small clearances arranged like a string of beads along the River Thames' were opened up during the Early Neolithic (Thomas 1999, 184).

There is increasing evidence from the Thames Valley to suggest that Early Neolithic patterns of settlement and resource exploitation remained remarkably similar to those of the Mesolithic, with activity tending to concentrate along the river margins. At Brookway, on the edge of the Rainham marshes, both Later Mesolithic microliths and Early Neolithic flintwork and pottery have been identified in the same layer, although estimating over how long a period the flints were deposited is impossible (Lewis 2000, 53). Similarly, across the Thames at Erith, Later Mesolithic and Early Neolithic material has been found in close association (Bennell 1998). The pattern that is emerging, both from the London region and within Britain generally, is largely one of continuity, with only gradual and piecemeal adoption of the Neolithic 'package'.

As well as settlement, patterns of routine movement through the landscape may also have been maintained across the Mesolithic/Neolithic transition (Edmonds 1999). What may be significant is that such movement may have become increasingly formalised and, in certain circumstances, some traditional routes and landscape boundaries may have required marking out or embodying. Large-scale excavations undertaken on the west London gravel terraces, particularly in the Heathrow area, have provided a clearer understanding of how such patterns may have developed. Here, Neolithic activity has been shown to extend from the traditionally settled floodplain margins on to the gravel terraces. In addition to general occupation, the terraces served as a focus for explicit ritual behaviour and monument construction. This involved the construction of ditches, post-alignments, and enclosures considered to symbolise the demarcation of differing ecotonal zones, and relate to traditions associated with the movement

through, and of particular locations within, the landscape. The interface between the alluvium and the gravel terrace was recognised as being of major importance, both as a line of movement and as a 'ceremonial processional route', ultimately to be monumentalised as the Stanwell cursus (Barrett *et al* 2000). At Prospect Park in Hillingdon, a substantial ditch, up to 7m wide, of possible Neolithic date was recorded running parallel to the River Colne, close to the boundary between the gravel terrace and the floodplain (Andrews 1996a).

The ditches demarcating watercourses and low-lying areas from higher ground as identified at both Plevna Road and Montagu Road may be an expression of similar concerns. They appeared to represent some of the earliest deliberately constructed features at both sites, most plausibly constructed during the Early Neolithic, and their positioning does suggest the possibility that they may have acted to define the landscape. The two ditches at Plevna Road were parallel although widely separated, and were suggestive of a wide zone or corridor following the axis of the high ground / low ground boundary.

The large curved ditches recorded at Plevna Road also appear to have been constructed early within the archaeological sequence. Although any confident interpretation of these features is beset with difficulties, the most plausible date for their construction would be during the Early Neolithic; their curvature suggests the possibility that they formed a double-ditched enclosure which, if the alignment of the western ditch was as extrapolated, could have been approximately 150–200m in diameter. The possible identification of an Early Neolithic enclosure within the London region would constitute a most important development in the prehistoric archaeology of the area, and even the possibility must require some comment. Early Neolithic enclosures are typified by causewayed enclosures, although recent research has demonstrated that they are extraordinarily heterogeneous and extremely diverse in form, as well as in the activities that took place within them (Darvill & Thomas 2001, 10–13). Many enclosures are segmented, and there is some evidence that the ditches here may have been. However, many non-causewayed enclosures are also known, and indeed many are not completely enclosed (*ibid.*). The location of a precursor to Salmon's Brook, some 50m to the south of the ditch, would preclude a full circular enclosure unless

the stream was incorporated into, or acted as a boundary to, the enclosure. Rivers were sometimes incorporated as part of the enclosure, as at Abingdon (Avery 1982), Southwick (Palmer 1976), and, interestingly, Waulud's Bank near Leagrave in the upper Lea Valley, which used the Lea as one of its boundaries (Dyer 1964). The only comparably sized Neolithic or Bronze Age earthwork known within the London region is a double-ditched enclosure identified at Mayfield Farm, East Bedfont, on the west London gravels, which has a maximum diameter of *c.*200m. This was originally thought to be of Late Bronze Age date, based on pottery recovered from the upper fills of one of the ditches (Merriman 1990, 31). More recently it has been argued that, as the pottery was from the upper fills, it could only date the period by which the enclosure had gone out of use, and large quantities of Later Neolithic flintwork recovered from the vicinity may indicate a more plausible date for the use of the monument (Lewis 2000, 73).

The morphology, possible dating, and topographical location of the ditches at Plevna Road are certainly favourably comparable to the nearest known Early Neolithic enclosures, at Staines and at Orsett (Robertson-Mackay 1987; Hedges & Buckley 1978), as well as to others further a field, such as Abingdon and Etton (Avery 1982; Pryor 1999). Interestingly, Plevna Road is virtually equidistant from Staines and Orsett, and the possible location of an Early Neolithic enclosure in the lower reaches of the Lea has recently been postulated (Lewis 2000, 72). Early Neolithic enclosures regularly produce ample evidence of diverse activities in the form of rich assemblages of pottery, bone, and lithics, often of an exotic nature. The only evidence of unusual practices that could be associated with the Plevna Road ditches is the deposition of the Palaeolithic handaxe, which was apparently deliberately placed in the ditch shortly after it was constructed; despite the handaxe's considerable antiquity, it would probably have been easily recognisable as an artefact, although presumably a strange and exotic one, by later prehistoric populations. Only small quantities of other artefactual material were recovered, although, as only small sections of the ditches were excavated and little bone or other organic material survived the soil conditions at the site, this may not be surprising. Many, although not necessarily all, Early Neolithic enclosures have complex series of pits, postholes and gullies located within

their interiors, although rarely can any coherent structures be identified. Most of the other features recorded at Plevna Road were considered Bronze or Iron Age in date, although very little dating evidence was recovered for any period. Some of the features, however, could potentially have been contemporary with the ditches, and perhaps significantly there was a concentration of Early Neolithic pottery and lithics to the south and east of the ditches, even if largely redeposited within later features (see Fig 4).

Evidence of Early Neolithic settlement is generally rare from anywhere in the London region, and, with the exception of the Stanwell cursus, the imposing monuments that characterise the period in other regions are mostly absent. Artefact concentrations have been identified, mostly scattered along the Thames' margins, as at Putney (Warren 1977), Twickenham (Sanford 1970), Kingston (Penn *et al* 1984; Serjeantson *et al* 1992), and Runnymede (Needham 1991), and to the east at Erith (Bennell 1998). During this period, the Thames seems to have been given a ritual, or more probably an accentuated ritual, significance, with numerous examples of polished stone axes from distant sources deposited in the river, apparently as votive offerings. Similar practices are likely to have extended into the Lea Valley, as much of the evidence for this period consists of hoards or isolated finds of axes, frequently recovered from within or adjacent to the floodplain.

Throughout the Neolithic and Early Bronze Age little evidence of permanent settlement or demarcated land tenure has been found anywhere in Britain, and the reality of functionally discreet domestic architecture of the kind commonly identified from the middle of the Bronze Age onwards has largely been discounted (*eg* Brück 1999; Pollard 1999). Instead, ephemeral and probably short-lived habitation sites, as evidenced by pottery and lithic scatters but with a dearth of associated structures, are considered to have been set within a landscape variously described as ritual, ceremonial, or monumental. Although the evidence is ambiguous, the large, possible enclosure ditches and perhaps the pit arrangement recorded at Plevna Road, both of which would defy simplistic 'domestic' interpretations, would not be out of place within such generalised models of Neolithic and Early Bronze Age landscape development. Pottery and lithics scattered across both sites certainly testify to some form of activity during these periods.

Whatever these features may have represented, following their disuse the archaeological record at the two sites, particularly Plevna Road, takes on a different character. As with the earlier phases of activity, dating evidence remains very sparse, but it would appear that by the end of the Bronze Age and continuing through into the Iron Age the archaeological record is dominated by features such as pits, postholes, gullies and ditches, suggestive of more formalised and permanent settlement and agricultural organisation. These features can be most closely paralleled with the systematic and formalised transformation of the landscape observed throughout much of southern Britain during the later parts of the Bronze Age. Excavations along the Thames Valley have increasingly revealed that by this time much of the fertile gravel and brickearth terraces had been transformed into a fully occupied agrarian landscape, consisting of small-scale dispersed settlements set within extensive field systems linked by trackways and geared towards explicit agricultural production (Richmond 1999; Yates 1999; Yates 2001).

In some places, the laying out of this agricultural landscape may have been organised around and focused upon earlier ceremonial monuments (Bradley 1978; Yates 1999). In the London region, such associations have been suggested at Hornchurch to the east (Guttmann & Last 2000, 349) and at Perry Oaks (Barrett *et al* 2000), East Molesey (Andrews 1996b), Imperial College Sports Ground (Wessex Archaeology 1998), and Ashford Prison (Carew *et al* 2006) to the west. In these cases, the development from a ceremonial to an agricultural landscape may not necessarily have been as abrupt as it would often appear in the archaeological record. As Bradley suggests (1998, 147), important themes do continue across this divide, and principles which governed the creation of the new landscape may have drawn heavily upon a symbolic code of considerable antiquity (*ibid*, 158).

The most extensively studied areas remain those on the west London gravels (*eg* O'Connell 1986; O'Connell 1990; Barclay *et al* 1995; Elsdon 1997; Andrews 1999a; Barrett *et al* 2001), but evidence for similar agricultural landscapes can also be found along the terraces of east London and south Essex, as identified at places such as Rainham (Greenwood 1982), Upminster (Greenwood 1986), and Ilford (Lawrence *et al* 1997; Greenwood 2001).

Although most obviously apparent along other

tributaries of the Thames, such as the Colne and the Wandle (Yates 2001), similar evidence of landscape reorganisation is increasingly being recognised along the lower Lea Valley. Approximately 6km to the north of Edmonton at Rammey Marsh, gullies and ditches of a Late Bronze Age field system, as well as post-built structures and pits indicative of settlement, were recorded adjacent to a water channel (Maloney & Holroyd 1999, 11). At Aylands Allotments, some 5.5km north of Plevna Road, the Later Mesolithic/Early Neolithic activity that was detected across the entire site was followed by a Late Bronze Age/Early Iron Age settlement limited to the higher parts of the site (Filer 1991, 302). Some 2km to the north at Chingford, excavations on the east bank of the River Lea revealed traces of activity in the form of pits, ditches, and postholes dating from the Bronze Age to Late Iron Age, probably agrarian in nature (Bishop *in press*). On the same side of the river, approximately 7km downstream, a series of excavations at Oliver Close have also revealed traces of later prehistoric settlement (Sabel 1993). Evidence of settlement, in the form of pits and postholes, that appeared to commence during the Late Bronze Age and continue into the Roman period has also been recorded at Kingsway, 2.5km west of Plevna Road (Maloney & Gostick 1998, 84). Further downstream at Bow, a series of field boundaries dated to the Middle or Late Bronze Age was replaced during the Late Iron Age by a post-built structure and a small enclosure (Taylor-Wilson 2000; Bishop *in prep*). Immediately across the River Lea from Bow, at Stratford Market Depot, a series of excavations has revealed a significant Late Bronze Age and Iron Age settlement, including evidence of funerary and ritual/ceremonial activity (Wilkinson 1993).

Although the evidence from the Plevna and Montagu Road sites was interpreted as representing agriculturally based activities, virtually nothing was forthcoming that could substantially illuminate the actual economy practised. Both of the sites were located on fertile ground, but in an area that would have been marginal, with the Lea floodplain to the east and the rising, drier ground of the gravel and brickearth terraces to the west. Especially at Montagu Road, anything other than periodic or seasonal settlement would have been severely limited by the effects of flooding. Pollen did not survive and the only floral macrofossils

consisted of alder (*Alnus glutinosa*) seeds and unidentifiable wood fragments recovered from the main palaeochannel fill at Montagu Road, and seeds indicative of disturbed ground from one of the pits at Plevna Road. The presence of alder close to a watercourse is not surprising, and plants indicative of disturbed ground, although consistent with agricultural activity, can shed little further information. Only a few animal bones, mostly from Plevna Road, survived the unfavourable soil conditions. These consisted of sheep, pig, calf and ox, although too few survived to suggest their importance or what ratios of species may have been originally exploited. The more easily tilled and freer-draining gravel and brickearth terraces were traditionally thought to have been preferred for arable cultivation, with a pastoral economy concentrating on the lower-lying floodplain margins.

At Hornchurch in east London, it was apparent that during the Late Bronze Age livestock farming was important, presumably utilising the marginal and low-lying pasturage adjacent to the site (Guttmann & Last 2000, 350). Numerous features were interpreted as animal management devices, and animal bone, spindle whorls, and loomweights suggested sheep were an important aspect of this. A buried ploughsoil that sealed the main settlement phase may suggest that an arable economy prevailed after the Bronze Age, but there was little evidence of earlier cereal growing. Charred plant remains certainly indicated that cereals were being used, but it was suggested that these might have been imported (*ibid.*). Similarly, at Reading Business Park, it has been suggested that cereals were imported, and that the economy there may have been dependent on flax production (Moore & Jennings 1992). Relatively large quantities of carbonised cereals have been excavated from the Iron Age Uphall Camp near Ilford (Greenwood 1989), although their presence may simply reflect a distributive role for the monument, and poor preservation precluded assessing the role of a local livestock economy.

As organic matter generally does not survive well on the gravel terraces and there is frequently a paucity of finds from occupation sites, the economic basis of later prehistoric society in the lower Thames remains poorly understood. Organic remains survive much better in the waterlogged floodplain environments, although even here the evidence is ambiguous. A pastoral economy has been shown to be important in the

east London marshes (Meddens & Beasley 1990; Meddens 1996), but in areas such as Southwark there is evidence for arable production in the form of ardmarks (Bowsher 1991; Drummond-Murray *et al* 1994; Bates & Minkin 1999; Ridgeway 1999) and the recovery of an ard-tip (Proctor & Bishop 2002). There is little collaborative evidence, such as from pollen, for extensive or sustained cereal growing in these areas however, and such cultivation may have only been a short-term, possibly even symbolic, phenomenon (*eg* Rowley-Conwy 1997).

Despite the identification of numerous features of all types, the excavations produced very little artefactual or ecofactual material — a pattern observed from many comparable sites throughout the London region (*eg* Andrews 1996a; Lawrence *et al* 1997). Hill (1995, 1) has demonstrated that even with later prehistoric sites that have produced rich artefactual assemblages, the actual proportions of materials recovered only represent a tiny fraction of the likely original assemblage. Ethnoarchaeological studies of refuse discard would suggest that, with the exception of a tiny proportion of material that becomes accidentally incorporated within archaeological deposits, ‘we should expect to find almost nothing excavating a rural settlement’ (*ibid.*, 4). Where substantial artefactual assemblages have been produced an explanation involving special depositional practices may need to be considered, such as at Hornchurch, where a proportion of the pottery recovered was considered to have been deliberately placed (Guttmann & Last 2000).

Low-lying marshy ground bordering the Lea and lower Thames also appears to have witnessed intensive exploitation during the Middle and Late Bronze Age, with pollen sequences from these areas suggesting large-scale deforestation and an intensification of arable agriculture at this time (Meddens 1996, 331). In the course of reservoir construction during the 19th and 20th centuries along the River Lea floodplain, a number of wooden structures were revealed, some evidently quite extensive. Although poorly understood and chronologically ill-defined, these structures demonstrate that considerable attention was still being paid to the floodplain during the later part of the Bronze Age and throughout the Iron Age — an interest confirmed by the more recent excavations of a number of Middle Bronze Age wooden trackways that traverse the peat bogs and marshes of east London (Meddens 1996).

There appears to have been a hiatus in activity at both sites from the end of the prehistoric until the medieval period, possibly due to continued wetter conditions compounded by their low-lying positions. Indeed, alluvial deposits continued to form into the medieval period at Montagu Road, although at Plevna Road, on a slightly higher elevation, activities such as pasturage could have continued but have left no trace. The earliest references to the village of Edmonton date from the 8th century, and by the time the Domesday Book was compiled it appears to have been a place of some consequence (Brown 1994, 158). Excavations around the Green, some 500m to the west of Plevna Road, have revealed evidence of almost continuous settlement activity dating back as far as the 11th century (*ibid.*). Pottery recovered from Plevna Road also indicated activity during this time, although no actual settlement evidence was recorded, and it seems likely that this area lay beyond the village core and was not settled until urban expansion subsumed the site during the 19th and 20th centuries. The identification of a substantial and long-lived boundary on the west of the site may even be evidence of the village's eastern perimeter, indicating that most of this site and all of Montagu Road lay beyond the village limits and, consistent with the archaeological findings, was only utilised for agriculture and marginal activities such as quarrying.

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