IRON AGE ROMFORD: LIFE ALONGSIDE THE RIVER DURING THE MID-FIRST MILLENNIUM BC

Barry Bishop

With contributions by Philip Armitage and Damian Goodburn

SUMMARY

Excavation alongside the River Rom in Romford revealed features of Early to Middle Iron Age date, including a hollow (possibly the remains of a structure), pits, ditches and an accumulation of worked wood. The hollow contained hearths and large quantities of burnt flint – such accumulations are usually referred to as 'burnt mounds'. The date of the remains at Romford is significant since they substantially increase the evidence for settlement in this period in London.

INTRODUCTION

During October and December 2005 archaeological investigations were conducted at Romside Commercial Centre and 146–147 North Street, Romford in the London Borough of Havering (Fig 1). The investigations were undertaken as a requirement of a planning condition placed upon the proposed residential redevelopment of the site, and were conducted by Pre-Construct Archaeology (Chadwick 2004; Chadwick & Dicks 2005).

The evaluation comprised the excavation of 12 trenches and revealed the presence of thick deposits of alluvium, overlying scattered features cut into the terrace gravels that formed the banks and margins of the pre-canalised River Rom. Two of the evaluation trenches, 10 and 12, were enlarged to allow further excavation and a more comprehensive understanding of the archaeological remains (Fig 2).

All written and artefactual material relating to the project, including the post-excavation assessment detailing the circumstances and methodology of the work, will be deposited with the London Archaeological Archive and Research Centre (LAARC) under the site code NOT05.

SITE LOCATION

The site was centred on National Grid Reference TQ 5075 8940, *c.*500m north of Romford town centre (see Fig 1), and was approximately 1 hectare in extent. Prior to the 1920s the site was predominantly in agricultural use. Subsequently a petrol garage was constructed on the North Street frontage and small industrial units occupied other parts of the site. These were extended during the 1940s and 1950s and continued in use until the recent redevelopment.

The excavation largely confirmed the British Geological Society mapping (1996) with fine-grained alluvium, deposited from the late prehistoric to medieval periods, overlying Quaternary Hackney Gravel Terrace deposits, which in turn overlie Palaeogene London Clay. The site is located towards the northern edge of the Hackney Gravel Terrace with Palaeogene London Clay, Claygate Beds and Pleistocene Glacial Tills dominating the surface geology further to the north.

The site is bisected by the River Rom, which flows north to south within a *c.*2m-

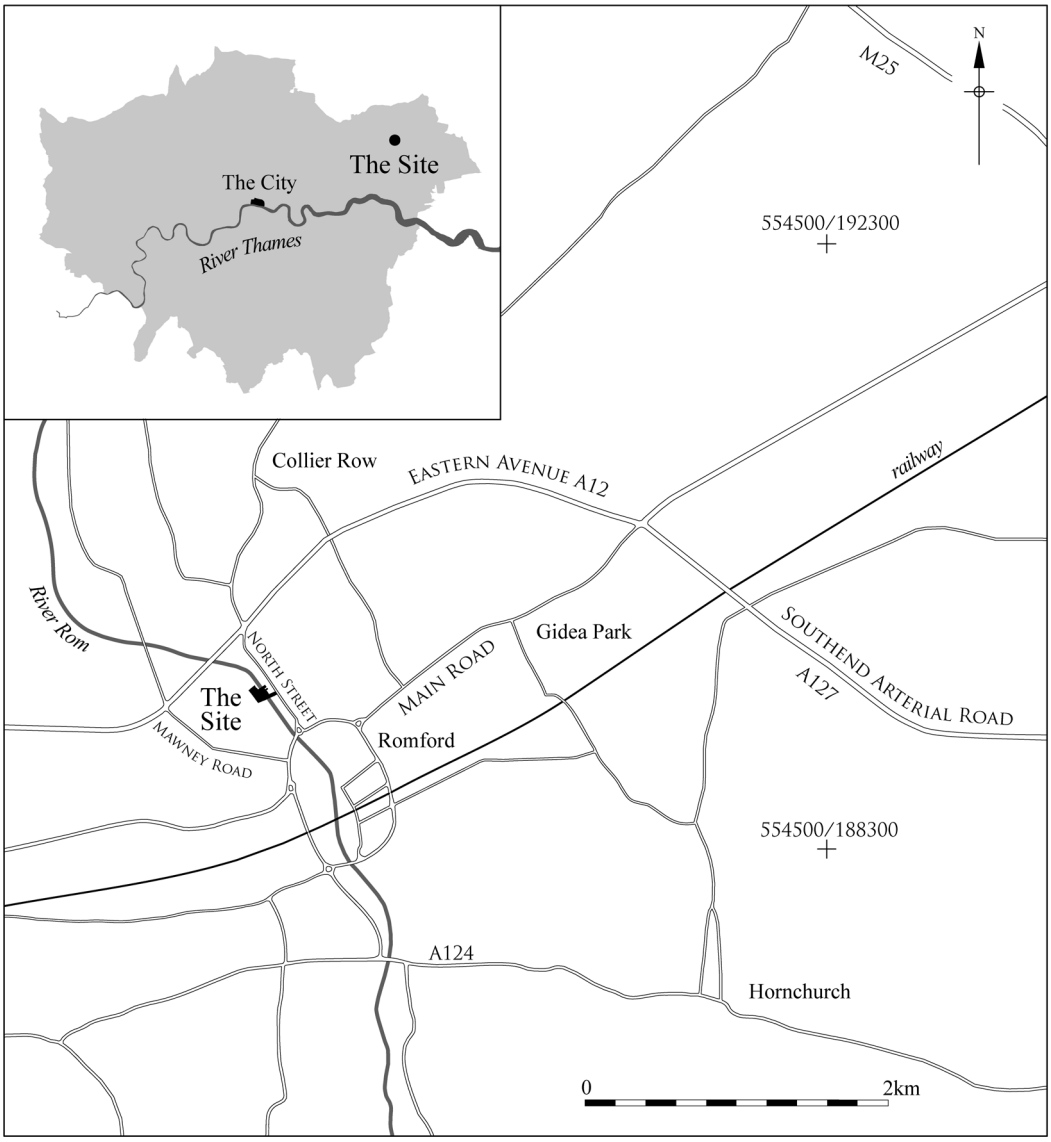

Fig 1. Site location

deep concrete channel, recorded at the footbridge on the site at *c.*13.5m OD. From here, the ground rises gradually to the east to North Street, at *c.*15.5m OD. West of the river, the ground remains virtually level to the western site boundary.

THE ARCHAEOLOGICAL SEQUENCE

The earliest deposits encountered consisted of firmly compacted gravels, pebbles and cobbles in a silt-clay matrix, representing riverine deposits of Pleistocene age. Spot heights, taken on the surface of the terrace gravels, demonstrated that the original land surface undulated quite considerably. Overall, site topography followed a downward trend, both towards the River Rom, where the slope became more pronounced at the channel edge, and from north to south. This reflects the drainage slope of the early to mid-Holocene Rom Valley and demonstrates

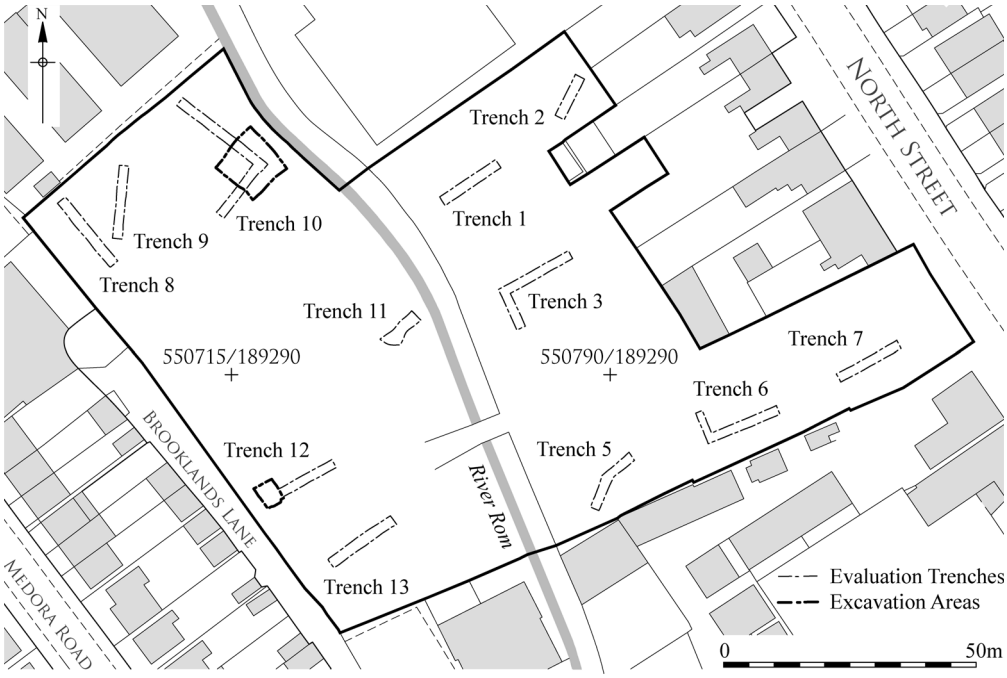

Fig 2. Trench locations and areas of further excavation

that the river has roughly maintained its position since then (Fig 3). Interestingly, the height of the terrace gravels in Trench 12 was closer to that recorded nearer to the River Rom than elsewhere along the western side of the site; this appears to indicate a natural depression, most probably formed by a minor early Holocene tributary, entering the river from the west. This feature may have influenced later activity, for it was on the edge of this depression that a prehistoric dump of worked wood was discovered.

Early to Middle Iron Age activity

Beneath the fine-grained alluvium, a variety of features recorded in the evaluation trenches represent fairly intensive activity across the site. These include an occupation hollow in Trench 10, a dump of worked wood in Trench 12, and a number of pits and gullies scattered across the eastern side of the site (Fig 4).

Taken together, the pottery, worked flint and, most importantly, a series of radiocarbon dates indicate that this activity occurred around the end of the Early or the beginning of the Middle Iron Age. The radiocarbon results have dated the worked wood in Trench 12 but cannot confirm whether this was contemporaneous with the other features ascribed to this phase. The hollow and one of the features in Trench 7 produced worked flint of similar technological characteristics to that from Trench 12, but these can only be dated to the later prehistoric period, from the Middle Bronze Age to the Iron Age. Pottery was only present in Trench 12; this was very fragmentary, with few diagnostic sherds, and could only be dated to the Late Bronze Age or Early Iron Age periods. Despite this, other factors, including the sedimentary sequence, suggest that all of these features are likely to be at least broadly contemporary. All features were cut directly into the terrace gravels, prior to any sustained alluvial deposition, which appeared to commence during or shortly after the occupation had taken place. The dump of wood in Trench 12 was sealed by flood deposits before any decomposition had occurred, while some of the features identified along the eastern bank of the

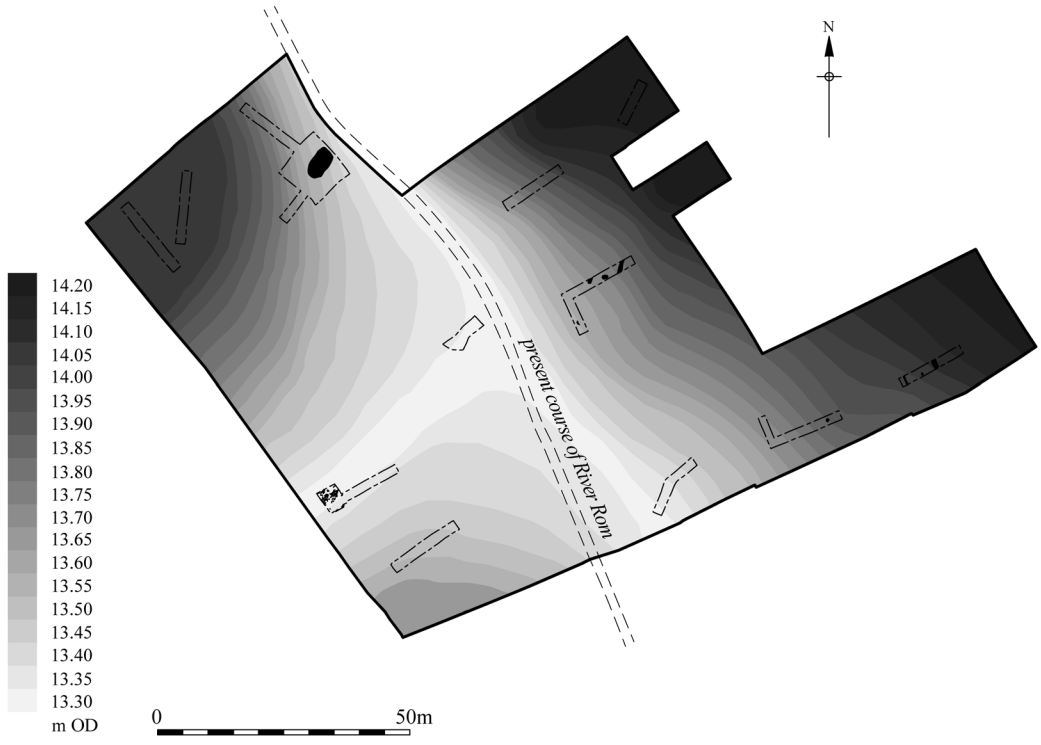

Fig 3. Site topography during the Early to Mid-Holocene

river had filled with alluvium from over-bank flooding. The occupation hollow identified in Trench 10 also appears to have been partially filled with flood deposits.

The hollow

The hollow revealed in Trench 10 was located close to the western bank of the river. It was roughly oval in plan, measuring 6.25m by 3.60m, and was aligned perpendicular to the river. Its base was flat and level and, as it was constructed on a sloping surface, its steeply cut sides were higher to the north-west than the south-east, the maximum depth being 0.50m (Fig 5).

The hollow had a complex series of fills indicating that at least two episodes of occupation occurred within the feature, both of which were abandoned due to flooding. The earliest fill of the hollow consisted of gravels, pebbles and cobbles set within a sandy silt-clay matrix [63]. This was a maximum of 0.10m thick and contained inclusions of charcoal, burnt flints and fragments of cattle teeth. The inclusions suggest occupational debris, whilst the clasts and matrix are harder to interpret; these may represent accumulations arising from erosion to the sides and base of cut [88], or possibly a deliberately constructed surface or floor. This layer was sealed by a silt-clay deposit up to 0.17m thick [121], representing an accumulation of fine-grained sediment from flooding of the feature.

Overlying this was a deposit of humic-rich silt-clay, a maximum of 70mm thick, containing frequent charcoal and small quantities of struck and burnt flint [84], again indicating activity within the hollow. A burnt deposit [83] *c.*1.20m in diameter was interpreted as a possible hearth, constructed upon (and partly within) the surface of [84]; fire reddening of the lower layer was noted to a depth of least 0.15m.

Sealing hearth [83] and layer [84] and completely filling cut [88] was a deposit of silt-clay containing large quantities of burnt flint

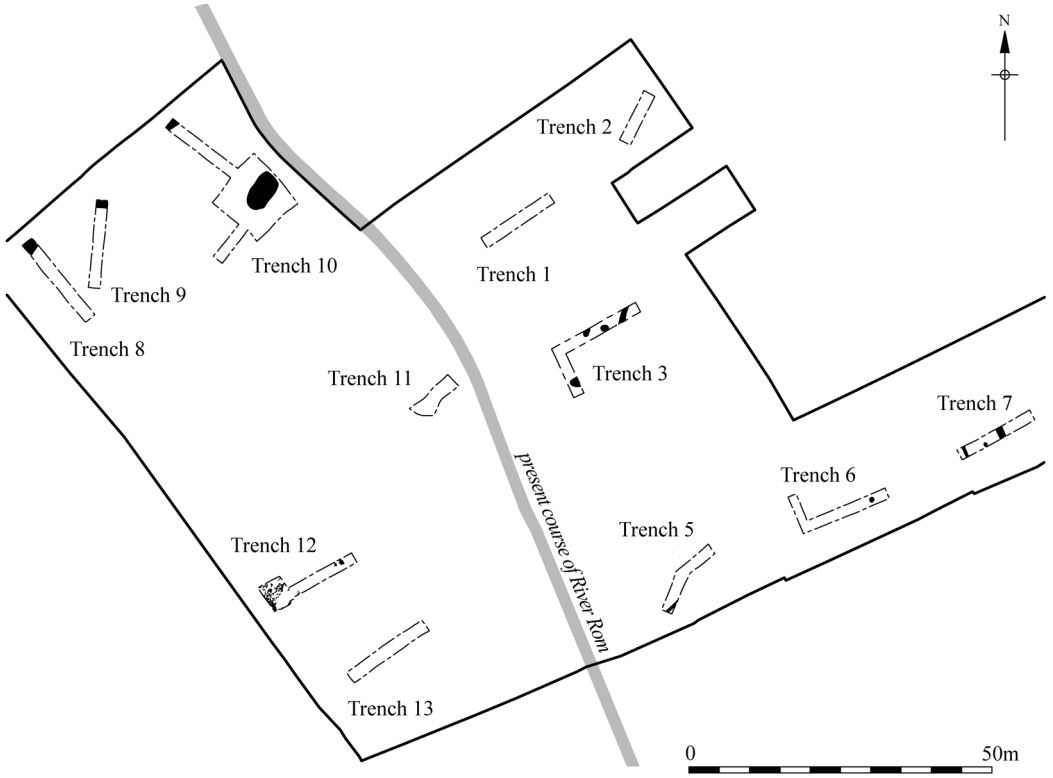

Fig 4. Plan showing distribution of features across the site

and occasional struck flint [85]. This deposit is interpreted as a further accumulation of fine-grained sediment representing a flood deposit. The substantial amount of burnt flint may originally have been produced within the hearth, with the resulting debris collapsing into or having been swept into the hollow. These flood deposits had completely infilled the hollow, but further activity continued with two more hearths being constructed on its surface.

Pit [81] was 0.49m deep and contained burnt silt-clay from *in-situ* burning within the pit, attested by its burnt sides and fire-reddened discolouration, which extended up to 0.15m into surrounding deposit [85]. Pit [120] was 0.22m deep and quadrilateral in shape with a silty clay fill, the upper parts of which had been fire-reddened. It was less clear with this pit whether fires had actually burnt within it or only on its surface.

No finds or datable material were recovered from either of these pits, although as they reused the same location as cut [88] and were sealed by alluvium that was thought to have started to accumulate during or shortly after the occupation, it is considered likely that they broadly followed on from the activities represented by cut [88] and its fills. The burnt horizons had been covered with gravels, possibly to put out or 'dampen down' the fire. The fills of both pits consisted of silt-clay, similar to the material that would have been extracted during their construction, but it was noted that both fills were very humic, indicating the incorporation of organic material. Both also contained quantities of charcoal, although, notably, neither produced any burnt flint.

The hollow with its accompanying fills represents a significant and intriguing feature for which there are no close parallels. It clearly was deliberately constructed with steep sides that prior to erosion may have been close to vertical, and it had a flat and level base. Its fills indicate that it was occupied

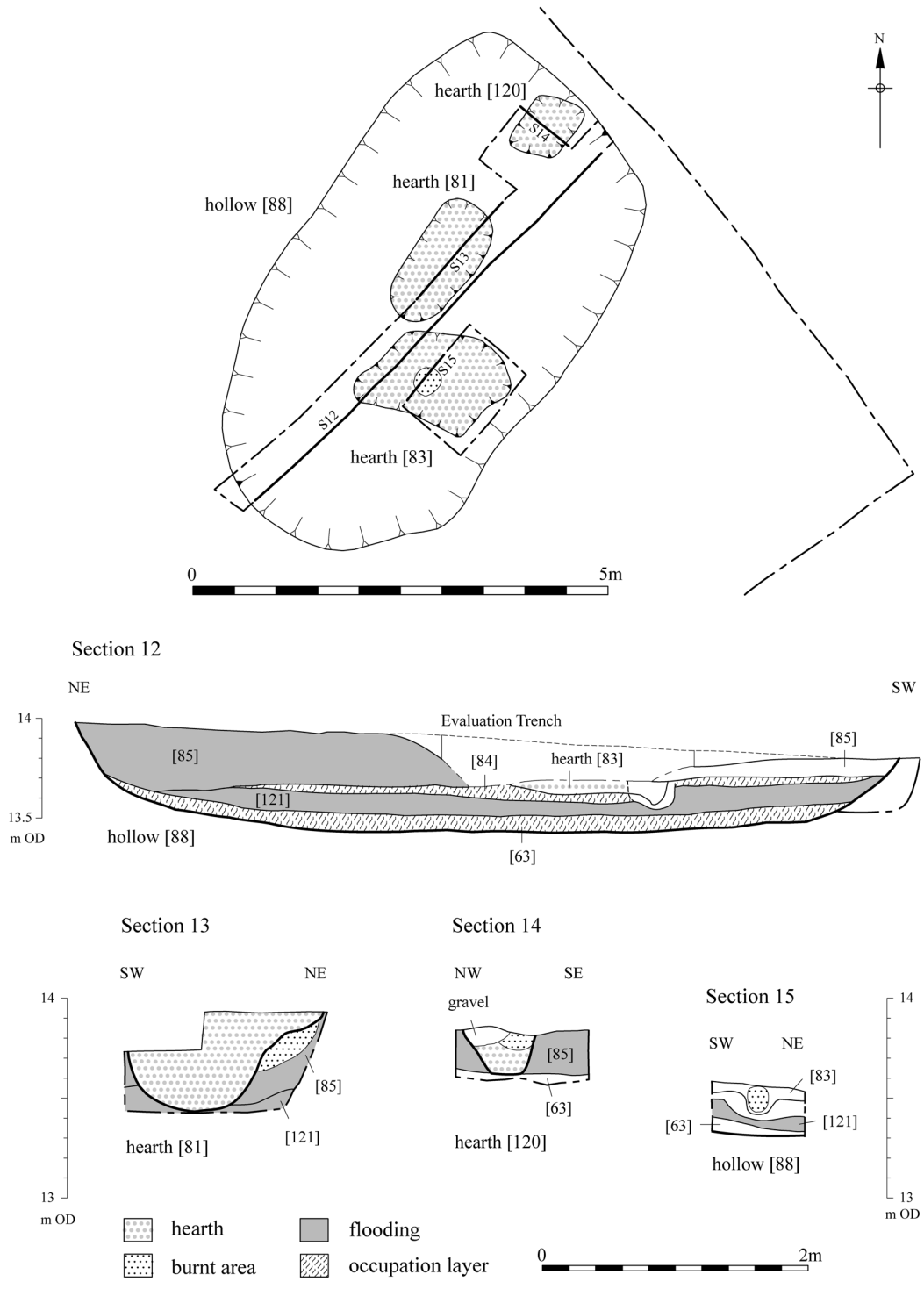

Fig 5. Plan and sections of the occupation hollow

or used repeatedly between episodes of flooding. Unfortunately no closely datable artefacts were recovered from its fills. It was abandoned prior to sustained alluviation, which, from dating evidence recovered from the dump of wood in Trench 12, appears to have commenced around the end of the Early Iron Age. Such a date would also be consistent with the few struck flints recovered from its uppermost fill [85].

Whatever type of structure it was, it appears to have been cut directly into the terrace gravels, which at that stage were not yet covered by the fine-grained alluvium that accumulated from the later flooding. It would therefore have been reasonably dry when constructed, although it does appear to have suffered from periodic flooding as well as being fairly rapidly covered in alluvial deposits after its abandonment.

The worked wood accumulation

In Trench 12, terrace gravels sloped down towards the north, and the trench appeared to lie on the southern edge of a depression within the gravels, probably a tributary of the River Rom (see Figs 3 and 6).

The earliest layers, located directly over the terrace gravels, comprised disturbed gravels [119] and [110], containing fragments of pottery, worked flint, burnt flint, organic material and charcoal. These appear to represent occupation or activity horizons and included discarded refuse, although it is uncertain whether this represents incidentally discarded items or deliberately dumped material. A radiocarbon sample of a carbonised oak twig from the upper part of these layers returned a date indicating its formation during the Early Iron Age.

Overlying the disturbed gravel layers, a group of timbers was excavated, including some woodworking waste and fragments of worked pieces [79] (see Fig 6). This comprised a layer up to 0.20m thick that had been sorted by water. Some pieces of the timber were embedded into the earlier layers whilst others protruded into the overlying layer. Layer [79] comprised silt-clay containing 'peaty' organic material and the wood, together with bone, charcoal, pottery, fired clay, that may have represented remnants of a loomweight, and struck flint flakes. The formation of this layer suggests increasingly wetter or marshy conditions, and the presence of artefactual debris suggests continued cultural activity after the wood had been deposited.

The wood sampled consisted of ten pieces of *Quercus* (oak), five of *Corylus* (hazel), four of *Salix/Populus* (willow/poplar), and three of *Cornus* (dogwood). Two further pieces were identified as either *Corylus* or *Alnus* (alder) (see below). Many of the timbers had been worked, including by cleaving, cutting ends, chipping and carving. Several pieces were lifted for analysis, including a fragment of a carved dish (see Fig 7.2). There was also a small number of abraded axe-cut chips, some of which were of oak, suggesting that woodworking took place nearby. The deposit also contained badly degraded bone, including cattle metacarpals, mandibles, tarsals and part of a scapula, as well as two sheep metatarsals. It is likely that more bone was originally present but had not survived. In addition, a worked red deer antler was present (see below). Radiocarbon determinations were taken on two samples of wood fragments, [93] and [102], which indicated that deposit [79] dates to the end of the Early Iron Age or beginning of the Middle Iron Age.

Deposit [79] was present across the full extent of the trench, although preservation deteriorated in the north-east where the deposit rose above the level of the water table. The wood fragments tended to be orientated roughly south-west–north-east and the layer was thickest where the natural terrace gravels were at their lowest. The timbers may have formed part of a trackway or a wooden platform, although the remains here did not share the typical characteristics of other preserved formal prehistoric wooden structures, such as the presence of structural timbers or *in-situ* retaining stakes. It is, therefore, not possible to establish whether this was the edge of a platform or trackway, or a dump of debris containing artefacts.

Following the formation of layer [79], a 0.20m-thick layer [109] of sands and gravels was laid down across the trench, petering out towards the western edge. This is unlikely to have been the result of fluvial action, as it would have required a fast-flowing river regime to deposit such coarse-grained clasts,

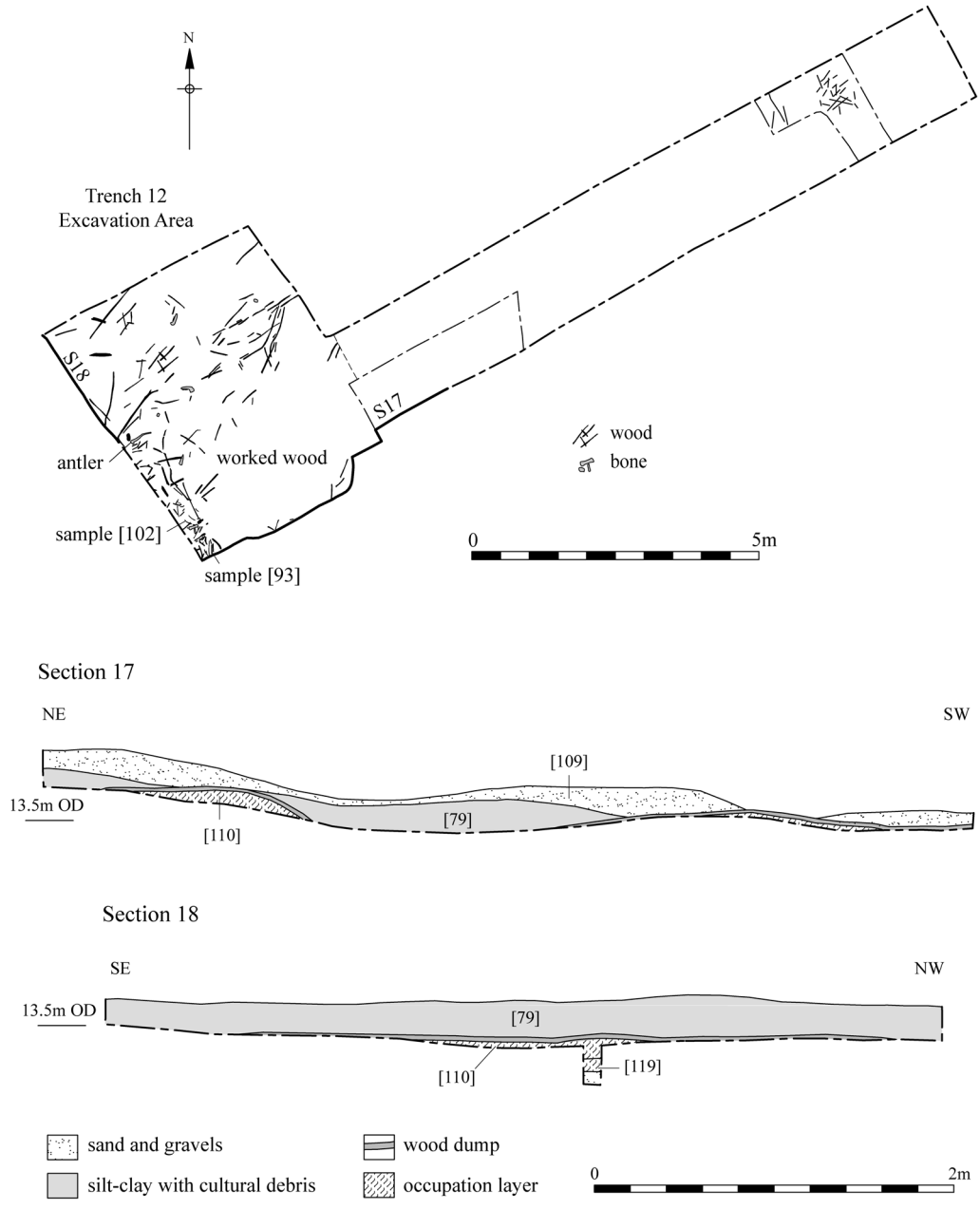

Fig 6. Plan and sections of wood dump and other deposits in Trench 12

and may have been deliberately dumped, possibly to consolidate what was evidently becoming a very wet and marshy area. Layer [109] was subsequently subsumed by further alluvium

A note on the radiocarbon dating

Three radiocarbon determinations were taken from fragments of wood recovered from Trench 12 using the AMS-Standard

Table 1. Radiocarbon determinations

Sample location	Sample type	Laboratory number	Conventional radiocarbon age	Intercept of radiocarbon age with calibration curve (cal BC)	1-sigma calibrated result (cal BC)	2-sigma calibrated results (cal BC)
93	Corylus	Beta-228270	2300±40 BP	390	400–370	410–360 & 290–240
102	Populus/Salix	Beta-228271	2410±40 BP	410	530–400	750–690 & 660–640 & 590–400
110	Quercus (twig wood)	Beta-228272	2490±40 BP	750 & 690 & 660 & 640 & 590	760–530	780–410

delivery method. They were analysed by the Beta Analytic Radiocarbon Dating Laboratory in Florida, who reported that they each provided plenty of carbon for accurate measurements and all the analyses proceeded normally.

Wood samples [93] and [102] were from the wood dump in Trench 12 (see Fig 6), whilst [110] was from the underlying occupation layer or dump. The samples were all from young wood, [93] and [102] were small roundwood branches and [110] twigs, thereby mitigating the problems of dating old wood. Overall, the three determinations provide a 2-sigma range (96% confidence) of between 780 and 240 cal BC for the activity in Trench 12. The period *c.*700–400 cal BC has a notorious radiocarbon calibration curve — it being generally flat with several wiggles; these result in wide error margins and can produce multiple date possibilities. Both of these problems are reflected in the radiocarbon dates from this site. However, if we consider the samples together, assuming that they relate to each other and are broadly contemporary, a more specific date range can be postulated. The later dates for sample [93] may be excluded, as these do not appear in the other two samples. Samples [102] and [110] overlap between 750 and 410 cal BC and the dates for all three samples coincide at 410 cal BC. The most plausible estimation for the activity in Trench 12 would therefore be around the end of the fifth or beginning of the fourth century BC at the end of the Early Iron Age and beginning of the Middle Iron Age (Haselgrove & Pope 2007; Needham 2007).

A note on the worked red deer (Cervus elaphus) antler

Philip L Armitage

A portion of red deer antler was recovered from context [79]: the specimen is identified as a naturally shed, right-hand antler of a mature (6th–7th head or older) stag. Both the brow and bez tines were removed in antiquity (see below) and the beam lacks the terminal points (broken away and lost in antiquity). There is a separated trez tine, broken (recently) at the base, which probably derives from the same antler (Fig 7.1).

Measurements taken on this specimen are recorded as follows:

Circumference of the burr (coronet) = 213mm
Distal circumference of the burr (von den Driesch 1976 measurement 41) = 186mm
Beam circumference = 159mm

The antler has a beam circumference notably larger than the mean value (149.5mm) documented in recent 'trophy' heads from England (data published in Legge 1981, 101), and compares with the 'magnificent' antlers (with beam circumferences of 152 and 158mm) of two stags killed in 1958–59 in Thetford Forest, East Anglia (see Whitehead 1980, 49). Comparison with the beam circumferences (range 90–200mm; mean 147.2mm) documented in the Grimes Graves antlers (Legge 1981, 101) shows that this specimen was in the upper size range for prehistoric antlers.

Removal of the brow and bez tines had been accomplished by scoring and cutting around the bases of the tines, penetrating the outer compact bone through to the inner 'spongy' cancellous bone core. Each

tine had then been broken ('snapped') off from the beam. It is important to note that in the manufacture of the antler picks at Grimes Graves, the brow tine was retained (left attached) and functioned as the 'pick', with the beam serving as the handle; only the bez, trez and terminal tines were removed (see Legge 1981, 102).

The specimen described here is a shed red deer antler that had been collected sometime in March or April (when red deer stags cast their antlers) rather than removed from a dead animal; subsequently the solid tines were removed as a source of raw material. Perhaps these tines had been fashioned into knife handles or into pointed implements for use in working animal skins? There is no indication that this specimen was ever a pick.

A note on the wood

D M Goodburn
with species identification by L Gray

The wood assemblage from context [79] did not show features typical of formal prehistoric 'platform' construction in the region, such as trimmed poles, branches or logs typically set parallel or at *c.*90 degrees in a horizontal plane (Carew *et al* 2009; Goodburn 2003). Neither did it contain any *in-situ* structural timber or retaining stakes. The worked wood and antler lay on the very western edge of the trench and only a small area of the deposit could be examined (see Fig 6).

As discussed above, the timbers are of late prehistoric date; no material suitable for tree-ring dating was found. The tool mark evidence was reviewed from a dating perspective; although it has been shown that the size and character of tool marks in later prehistoric woodwork assemblages can be used to provide broad dating, this approach requires larger worked wood than was found at this site. All that can be said from the tool mark evidence is that they were fairly crisp and smooth, where best preserved, indicating the use of metal rather than stone blades.

Recording and sampling the worked wood

The approach used to record and sample this assemblage was in keeping with the 1996 English Heritage Guidelines on Waterlogged Wood (Brunning 1996).

A total of 63 items was lifted. Some 40 were labelled generically to the layer from which they came; clearly worked pieces were given individual context numbers and marked on the plans. A total of 18 items bore cut marks or other evidence of working (or charring in one case). The rest comprised amorphous crushed fragments of roundwood, fragments of coarse bark. Several samples were taken for species identification.

Following off-site cleaning, a selection of worked items was drawn in detail and photographed. Nine other less well preserved worked items were described in summary. None of the material was considered suitable for conservation and retention due to its crushed and fragmentary nature.

Notable worked pieces

A single fragment from a carved wooden bowl (Fig 7.2) survived. This was split from either the side or base of a carved trough-like bowl. It was a hockey-stick-shaped fragment, 235mm long, 38mm wide but only 8mm thick. The original darkened and smooth surface of the vessel survived along the edges of the split fragment. The vessel was carved from a straight-grained section of timber, probably a half log; it was sampled and botanically identified as 'cf Quercus sp.', probably oak. Two other smaller fragments of cut and split timber found close by also seem to derive from the same vessel and were also identified as 'cf Quercus sp.'. Trough-form vessels are known from the Neolithic through to recent times in Britain (Earwood 1993, 50). Small vessels, such as this, are likely to have been for domestic use, such as eating or mixing vessels.

A single burnt fragment (Fig 7.3) was also of interest; measuring *c.*170mm by 100mm by 50mm, it was probably a fragment of partially burnt firewood.

A small radially cleft stake or peg (Fig 7.4) from a straight-grained section of slow grown timber was found horizontally placed, although its original function is uncertain due to its small size. There was modern damage at one end, whilst the other had been smoothly carved into a fine point with two facets. It was *c.*355mm long, 25mm wide and 15mm thick.

Other clearly worked items included small cut rod ends and cleft stakes of oak and hazel,

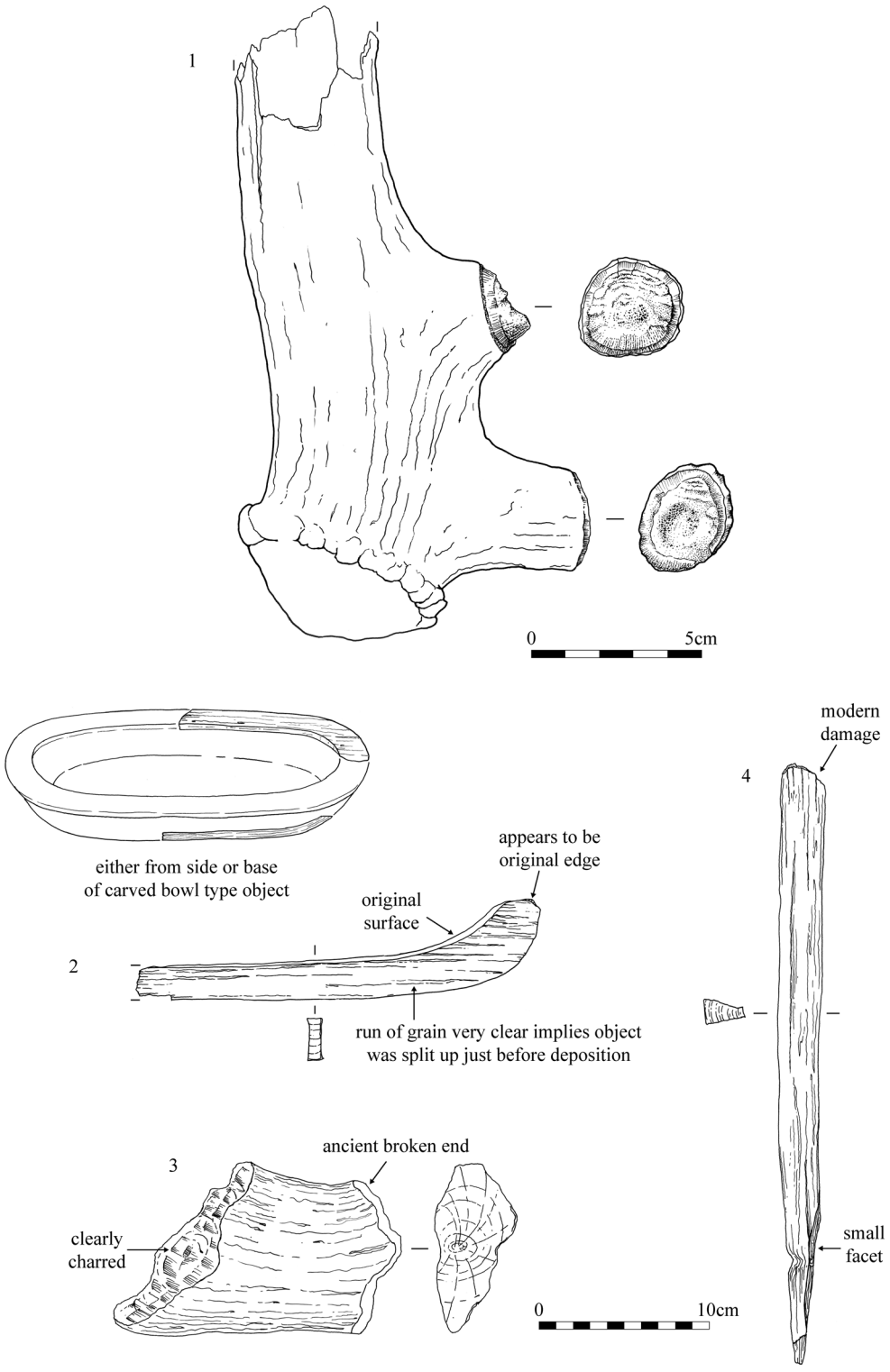

Fig 7. Antler and worked wood

a probable coppiced stem 'heel', identified as oak, and a small number of abraded axe-cut chips, some of which were of oak.

Discussion of the wood debris

Although small in terms of the London-wide corpus, the assemblage throws light on Early to Middle Iron Age activity in the Rom Valley. Close to the site, activities involving the use of small stakes and pegs were being carried out; there is also some evidence that larger sections of oak timber were worked near by and that firewood was being prepared. The material is of local importance and highlights the potential for Iron Age woodworking evidence in the Rom Valley.

Other features

A number of other archaeological features were recorded in three other evaluation trenches. These were all located in the south-eastern part of the site and indicate fairly intensive activity along the margins of the River Rom (Fig 8). The features include pits, ditches and tree throws.

In Trench 3, three pits and a small ditch were recorded. One fully excavated pit [29] measured 1.20m by 0.80m and was 0.16m deep. The other two, both of which continued beyond the limits of excavation, were larger and had irregular sides and concave bases; one was 0.14m deep and the other 0.37m. All three pits had been filled

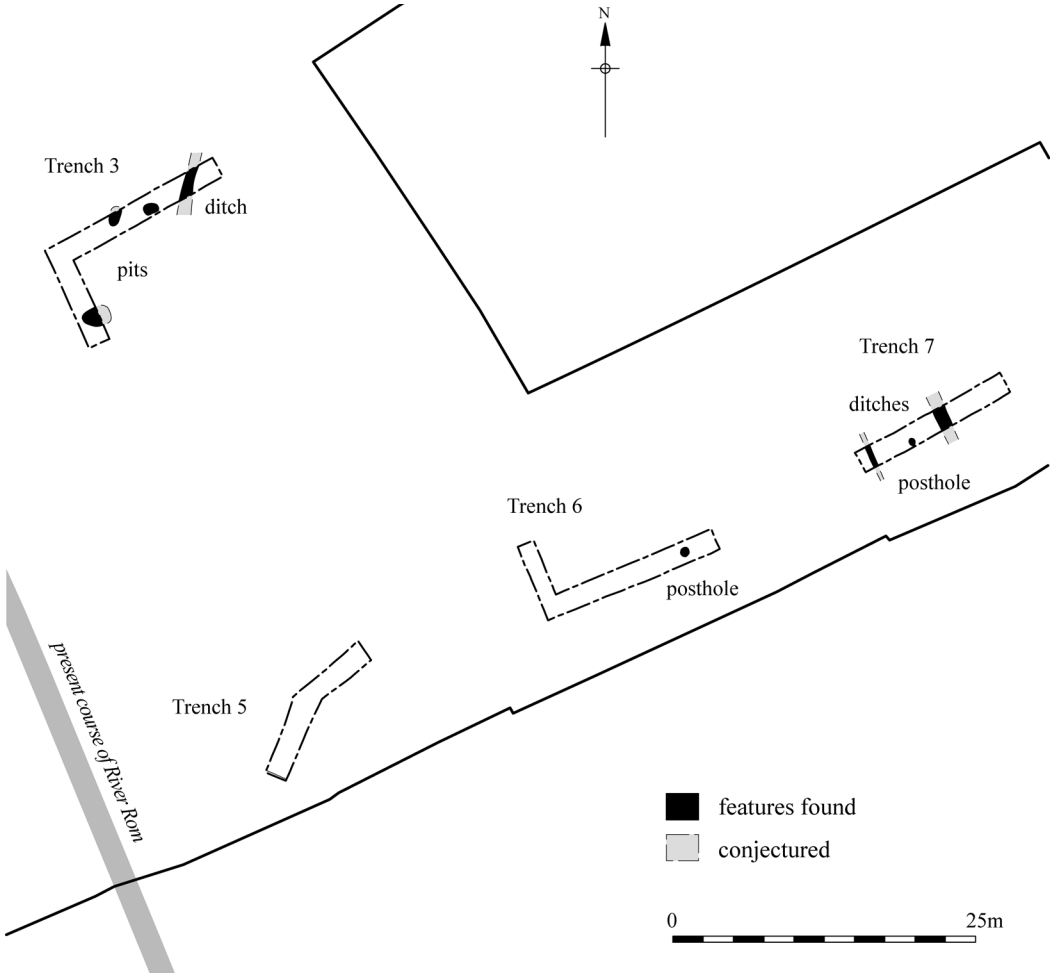

Fig 8. Features on the eastern bank of the River Rom

with silty clay and contained relatively high quantities of charcoal and burnt flint. It was not clear whether the pits were purposefully dug or naturally formed, such as by toppled trees. The ditch/gully [31] was aligned north–south and continued beyond both edges of excavation. It was 0.90m wide and up to 0.36m deep with variably steep sides; it produced no finds.

In Trench 6, only one feature was found; this contained no finds. It was circular in plan, varying from 0.70m to 0.75m in diameter and was 0.22m deep. Its shape and size suggest it may have been an eroded posthole and, if so, it would have held a fairly substantial post. A struck flint and charcoal were present in the alluvium overlying the terrace gravels in this trench.

Trench 7 contained three features, two ditches and another possible posthole. The posthole was oval in plan with a maximum diameter of 0.62m and was 0.50m deep. The only find from its fill consisted of a single undiagnostic struck flint flake. The two ditches were of different widths, the smaller being 0.45m wide and only 80mm deep, whilst the larger was 1.00m wide and 0.24m deep, but both were on a similar alignment, being oriented south-east–north-west.

The fills of most of the features on the east side of the river consisted of silty clay similar to the overlying alluvial deposits sealing them. This may indicate that, at least in some cases, the features were filled naturally by over-bank flooding. Many features were shallow, and it is possible that flooding had caused considerable scouring and erosion.

Later prehistoric and historic alluviation

As mentioned above, fine-grained alluvium sealed all features and was present across all investigated areas. Overall, the patterns of deposition observed across the site were varied and complex, with 24 separate deposits recorded, representing up to four major flooding episodes.

The deposits are interpreted as periodic over-bank flooding of the River Rom, resulting in the sedimentary infilling of this part of the valley and signalling increasingly wetter conditions, poorer drainage and changes to the river's regime. These fine-grained silty clays would have been deposited under low-energy conditions, suggesting that they were laid down when the site was inundated by slow-moving or stagnant water. As these sediments were identified in all trenches, it would appear that this body of water was at least 150m wide from east to west. However, deposition was intermittent, with extended dry periods when ground conditions allowed oxidation, resulting in an orange mottling to the silty clay and the precipitation of manganese, as identified in some alluvial units. The presence of occasional gravel and pebbles within the alluvium may indicate bioturbation, with the establishment of plant colonies during drier conditions.

Alluviation appears to have commenced not long after the initial occupation of the area in around 400 BC and it continued into the post-medieval period, albeit sporadically, as evidenced by occasional pieces of medieval and post-medieval pottery. However, the low frequency of cultural material recovered from the alluvium suggests that once intermittent flooding episodes commenced, the area became marginal. The River Rom continued to flood sporadically, as evidenced by illustrations of the catastrophic inundations that occurred in August 1888 (Fig 9), until recent canalisation works brought the river under control.

A return to drier conditions

At some point during the late medieval or post-medieval period two ditches, one in Trench 5 and the other in Trench 8, were dug into the surface of the alluvium. They were both oriented approximately east–west, towards the river, and were filled with waterlain silty clays (Fig 10). They were probably constructed to aid drainage. Dating evidence from the ditches was very limited. They cut through the latest deposits of alluvium and were sealed by a soil horizon, which probably formed through biological and agricultural reworking of the upper levels of the alluvium. This would suggest that they are no earlier than the late medieval period, when alluvium continued to be deposited, and no later than the late post-medieval period, when the upper levels of the alluvium were being reworked into a soil horizon.

The only other feature that preceded

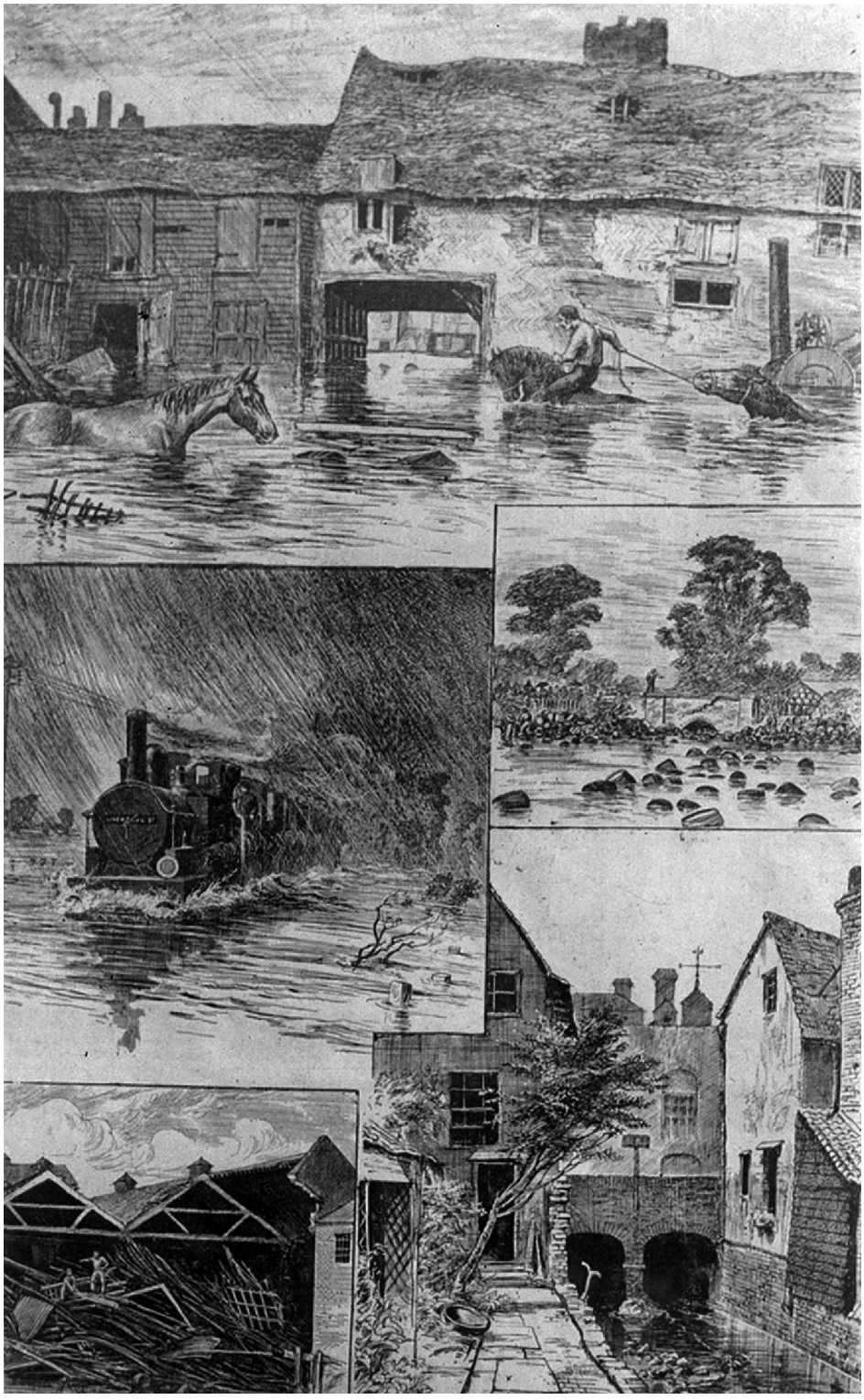

Fig 9. Romford in flood, August 1888 (image courtesy of Phil Steer)

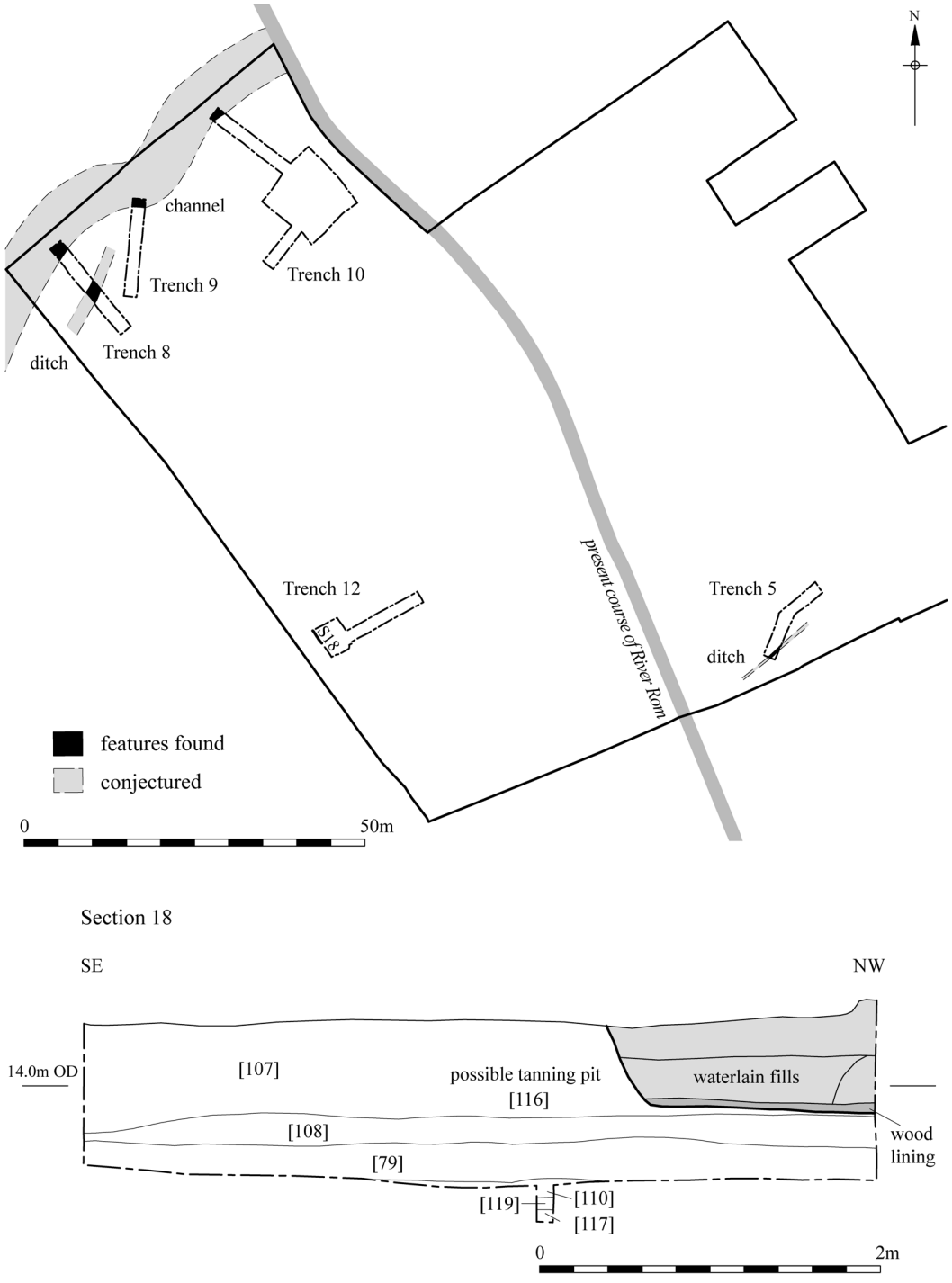

Fig 10. Later features

formation of the soil horizon consisted of a square pit, recorded in Trench 12. It was steep sided and the base was lined with wood, possibly planking; it had three fills, all waterlain (see Fig 10). The only dating evidence consisted of a small fragment of peg tile from the uppermost fill, indicating that it is unlikely to have been earlier than medieval. Its function remains uncertain, although it shares certain characteristics with early tanning pits, which have been identified at other, often low-lying, sites along the lower Thames Valley.

By the late medieval/early post-medieval period, therefore, there was renewed activity in the area. Attempts were made to drain the wet site, whilst the possible tanning pit suggests low-key industrial activity. Efforts to control flooding and reclaim the extensive wet areas of East London are well-documented from the medieval period onwards, whilst 'unpleasant' industries, such as tanning, were often undertaken close to water sources but away from the main centres of settlement. However, the precise timing, extent and duration of activity at the site remains uncertain.

The overlying soil horizon, formed from the biological reworking and probable ploughing of the upper surface of the alluvium, signals the end of regular flooding. Few finds were recovered from this soil, but occasional fragments of pottery and broken bricks suggest that it formed during the post-medieval period.

The formation of a soil signals the end of wetland conditions. Whether this was occasioned by human intervention, such as the drainage operation described above, or was the consequence of natural conditions, such as a decrease in rainfall or water run-off rates, or a combination of these factors, is not clear from the evidence. It does fit in with the general pattern in the lower Thames Valley, where by the post-medieval period many former wetlands had been reclaimed.

The only other evidence of pre-20th-century activity at the site consisted of a large cut feature. Its southern edge was recorded on the north side of the site but its full width could not be ascertained. It contained at least two fills, both of which were similar to the earlier alluvium and may represent the natural silting-up of the feature or its deliberate backfilling. These fills also contained fragments of London Stock bricks, dating it to no earlier than the late 18th century. As only small portions of this feature were observed, its function remains elusive; however, its size suggests a substantial ditch or channel, which may have joined up with the river. It may have been dug to provide drainage or as a short canal, inlet or basin adjacent to the River Rom and relating to some local industry.

Documentary sources indicate that the site remained in predominantly agricultural land use until the early 20th century when a garage and other light industrial units were constructed. Some evidence of these was recorded in the form of layers of redeposited alluvium, brick rubble and garden soil across the site, representing levelling and consolidation.

DISCUSSION

As the areas examined were limited, it has not been possible to fully characterise the early occupation of the site: features were present on both banks of the River Rom but no patterning or variation in density of features was indicated. The postholes indicate the presence of structures, although as only two isolated examples were found, it is impossible to conjecture as to what the nature of these may have been. Ditches are frequently found on settlement sites and have been ascribed a range of functions, including drainage channels, eavedrip gullies and boundary markers. Pit digging was a ubiquitous activity during the later prehistoric period, pits often forming the most common feature type found in settlements. Unfortunately, they are often artefact-sterile or only contain small quantities of cultural material, limiting their interpretation.

The hollow

The hollow recorded on the western side of the river clearly represents a complex feature. The presence of hearths within the hollow, as well as fragments of bone, burnt flint and worked flint, and humic material, indicates at least two phases of occupation, interspersed with flood events.

The activities undertaken in the hollow

are difficult to define but clearly involved both hearth use and the production of large quantities of burnt flint, although the latter could only be definitively associated with its last phase of use. The presence of animal bone may indicate food preparation and cooking. The struck flint may be related to this or may indicate other activities.

The hollow was shallow and would have afforded little protection from the elements. Although no evidence for a superstructure was forthcoming from the excavations, the possibility exists that it may originally have been surrounded by stakes or postholes, to form a perimeter wall or support for a roof structure. A further possibility is that it represented part of a larger structure, with a superstructure placed beyond the limits of excavation. It is worth remembering that many pieces of worked wood, including domestic utensils and possible structural supports, were recovered from Trench 12, some 50m to the south.

The hollow was of a comparable size to other Bronze and Iron Age domestic structures identified elsewhere in the region, which normally comprise roundhouses varying between *c.*5m and 10m in diameter. Oval or rectangular structures are known from the later prehistoric period and may be more common than often assumed. Many examples may have had insubstantial superstructures and have only been recognised under exceptional preservational circumstances (Moore 2003). These include a number of 'sunken-floored-constructions'. A Middle–Late Bronze Age oval 'sunken hut', *c.*4m long by 3m wide, has been identified at Kemsley Fields near Sittingbourne in Kent, which had postholes located just inside its edges, suggesting it may have had a wooden superstructure (Willson 2001, 32; Diack 2006, 22). Similar features of Late Bronze Age or Early Iron Age date have been recorded at Chestfield, near Whitstable (Canterbury Archaeological Trust 2002, 349) and at Minster-in-Sheppey (Diack 2004), and a mid-Iron Age sunken structure has been recorded adjacent to a lake at Darenth, also in Kent (Philp *et al* 1998). The size and morphology of the Darenth example are remarkably similar to the hollow at North Street, being described as an oval hollow with steep sides and a flat base measuring 5.60m by 3.20m and 0.35m deep. It was interpreted as possibly being a 'small hut with a sunken floor' (*ibid*, 11). A further sunken building, measuring 6m by 4.5m, surrounded by a series of shallow postholes suggestive of a superstructure, was excavated near Ware in Hertfordshire (Kiln 1977). This contained a central hearth and large quantities of occupation debris, including pottery with Late Bronze Age or Early Iron Age affinities (*ibid*). Similarly sized, shaped and dated structures, although not sunken, have been recorded in the Gwent marshes; these have been interpreted as the seasonal abodes of pastoralists (Rippon 1996; Bell *et al* 2000).

Whether the 'sunken' aspect of such structures relates to a less common construction technique or indicates a specialist role or function remains to be determined. What is clear is that a sunken-floored building of only 0.50m depth would, under most circumstances, be obliterated if the area was later subjected to ploughing. Had the North Street example not been fortuitously preserved beneath alluvium, it is likely that the only archaeological traces of it would have been limited to a scatter of burnt flint and a few struck flints incorporated within the topsoil.

A survey of non-circular Iron Age structures by Moore (2003) indicates that these were probably very diverse in form and may have fulfilled a number of different uses. These could include use as dwellings, ritual buildings, workshops, shelters and stores, and the function of individual buildings may have changed during their lifespan (*ibid*, 55–6). The hollow at North Street may have been used as a dwelling, although such an interpretation is problematic. It was located very close to the river and was flooded on at least two occasions. This would suggest that the hollow was only used intermittently, perhaps seasonally, when conditions were sufficiently dry, most likely during the late spring or summer months.

The quantities of burnt flint found may also be incongruent with simple domestic hearth use. The material had been uniformly and intensively burnt and it would appear that large quantities were present in the vicinity of the hollow, although later flooding had re-sorted it. It appeared to have been systematically generated, and

such accumulations are usually referred to as 'burnt mound' sites. Other characteristics of the hollow are also typical of burnt mound sites identified throughout Britain and Ireland. These are invariably found close to water and are often associated with hearths that presumably heated the stones, and with pits or troughs that may have held water. In some cases they are associated with small buildings (Bradley 2007, 214). Many such sites produce little or no further cultural material and, consequently, their significance and the ways in which they were used remain enigmatic. A variety of explanations have been proposed; the most prevalent regard them as food preparation sites (*eg* Buckley 1990; Hodder & Barfield 1991). They are often large, suggesting communal effort, perhaps associated with feasting or other ceremonial practices (Dunkin 2001). Other explanations include the suggestion that they represent the residues of saunas (Barfield & Hodder 1987), or accumulations emanating from a variety of industrial processes, such as leather making or wool processing (Barfield 1991; Jeffery 1991).

Burnt mounds dating from the Neolithic to the Bronze Age have been found at many other low-lying locations throughout the lower Thames Valley. Perhaps the most comparable has recently been excavated in Kensington (Moore *et al* 2003). Here a large hollow measuring in excess of 8m by 3.5m was recorded; this had subsequently been infilled with substantial quantities of burnt flint. The hollow itself has been interpreted as a naturally formed feature, possibly a springhead, but postholes in its base and around its edges could have supported some form of roof or superstructure. A pit cut into its base contained a complete decorated post-Deverel-Rimbury jar datable to the Late Bronze Age/Early Iron Age transition. Nearby, a large rectangular building of similar date was recorded. This contained an internal sub-rectangular 'basement' measuring nearly 4m by over 2m (Bradley 2003). These hollows at Kensington and North Street may have been integral elements directly related to the processes that resulted in the formation of the burnt flint accumulations, or may have functioned as the residences of those involved in such processes, and were perhaps only occupied on a seasonal basis.

The wood dump

Consideration of the topography of the area suggests that Trench 12 was located towards the edge of a lower-lying depression, perhaps a small pond, lake, oxbow lake or a tributary stream of the River Rom. The earliest deposits represent disturbance and deposition of cultural material on the natural terrace gravels. This indicates that some activity was taking place on the banks of the depression, which was subsequently used for the dumping of wood or the construction of a wooden base or structure.

Wooden structures dating to the later prehistoric period are well represented in the East London area. A number of trackways have been identified along both northern and southern edges of the lower Thames Valley (Philp & Garrod 1994; Meddens 1996; Thomas & Rackham 1996; Bennell 1998) and a wooden platform has recently been excavated at Woolwich Manor Way in Newham (Carew *et al* 2009). The majority of these structures have been dated to the Middle or Later Bronze Age, although it is possible that wooden structures observed in the lower Lea Valley may have been of Iron Age date. They demonstrate intensive use of the expanding wetlands lining the Thames, although, in general, the exceptional preservational conditions necessary for their survival do not extend far up the tributary valleys.

The timber at North Street does not appear to be part of a deliberate construction and shows no evidence of structural elements or of having been purposefully placed. Taken together with other cultural material recovered in association with it, it is possible that this area was used to dump 'refuse'; it had perhaps lain on the periphery of a settlement, platform or crannog-type structure. Deposits of this kind have been recorded at a few other later prehistoric sites; a much more extensive midden deposit associated with a Late Bronze Age riverside settlement was recorded at Runnymede Bridge for example (Needham 1991), and similar deposits have been recorded at the Middle Bronze Age Freemasons Road Underpass site along the A13 in Beckton, where they were associated with a timber post alignment (Douglas 2003).

The rapid submergence of the timber within wet silty clay meant good preservation at North Street, and it is possible that the wood was dumped on purpose in an attempt to consolidate increasingly wetter ground. After the wood had been largely subsumed by these fine-grained sediments, further alluvium continued to be deposited. A continuation of settlement in the vicinity is attested by additional pottery, wood, charcoal, burnt flint and struck flint being deposited into this alluvium.

Abandonment

Ultimately, activity at the site appears to have ceased as the alluvium continued to accumulate. Its location, high upstream in the Rom Valley, means that alluviation cannot be directly correlated with that recorded widely along the lower Thames Valley, which resulted in the inundation of large tracts of previously settled lowland landscapes, broadly dated to the late second/early first millennia BC. The tidal head moving up the tributary valleys with progressively rising sea levels may have accentuated this process (*eg* Bates 1998), but other causes, including changes in the fluvial regime of the Rom and increased wetter conditions during this period, are likely to have had more of a direct effect (*cf* Lambrick & Robinson 1979).

THE BROADER CONTEXT

Radiocarbon dating indicates that the activity recorded at North Street belongs to the Early or Middle Iron Age centring on the transition of these two periods at around 400 cal BC. For many years, these earlier parts of the Iron Age have been regarded as a rather shadowy period in the prehistory of the London region. A number of hillforts have long been recognised around its outskirts, and high status metalwork has repeatedly been recovered from the Thames, but until recently few settlements had been identified and little is known regarding day-to-day life (Greenwood 1997, 155; Merriman 2000, 43).

This situation contrasts with that of the preceding Late Bronze Age. During this period, from around 1100 to 800 BC, the brickearth and gravel terraces of the lower Thames Valley, its estuary and major tributaries witnessed a hitherto unprecedented reorganisation of the landscape. This involved the construction of a series of extensive and formally laid out ditched field-systems, droveways and waterholes associated with a complex hierarchical settlement pattern; taken together, these suggest a major intensification in settlement and agricultural production (Yates 2001; 2007).

These patterns of intensification continued into the earliest Iron Age (Needham 2007) but following the eighth century BC, characteristic settlements and associated field-systems, previously present across much of south-eastern Britain, suddenly disappear. It is not until the Late Iron Age, the couple of centuries preceding the Roman conquest, that a comparable complexity in landscape and social organisation becomes recognisable again within the archaeological record (Greenwood 1997; Bradley & Yates 2007; Needham 2007). This leaves a hiatus of *c.*500 years or more in the record, but it is during this period that North Street was occupied.

This hiatus and the seeming paucity of archaeological evidence from across south-eastern Britain during this time has often led to the period being regarded as representing a retrenchment in social and agricultural expansion, perhaps marking a cultural recession and resulting in what may seem to be a later prehistoric dark age. Possible reasons put forward for this apparent dislocation include the effects on the previous, bronze-based, social and political systems caused by the introduction of iron technology that occurred during the eighth century BC. This is a complicated arena, however, as it is far from certain whether the introduction of iron technology was responsible for the collapse or whether the disappearance of bronze instigated and promoted the use of iron (Needham 2007). Other, perhaps related, reasons that have been suggested for the changes that were occurring during the Early and Middle Bronze Age include a decline in the productivity of the agricultural lands, climatic deterioration and increasingly wetter conditions, with rising river and sea levels (Devoy 1979; 1980; Allen *et al* 1997; Merriman 2000, 43–4; Poulton 2004, 52). Within the London region, there is ample evidence for renewed alluviation and increased peat accumulation that resulted in the inundation

of substantial tracts of previously dry land (*eg* Meddens 1996; Sidell *et al* 2000; 2002). These processes must have had a profound effect on the economic basis of Late Bronze Age and Early Iron Age prosperity, resulting in a decline in agricultural productivity and therefore weakening a social system that was underpinned by the manipulation of surpluses.

Such processes were at play at North Street, where the river margins had to be abandoned due to rising river levels and increased incidences of flooding. Although these effects occurred too late to have been associated with the initial Late Bronze Age decline, similar effects were likely to have occurred earlier further downstream, and do emphasise that climatic factors were most likely to have had gradual, rather than catastrophic, consequences.

Although still much less abundant than for the Late Bronze Age or the Late Iron Age, sites such as North Street demonstrate that occupation during the Early and Middle Iron Age is far from absent across the north-east London terraces and is continuing to be discovered, particularly as development-led fieldwork investigates hitherto unexplored areas. The nearest evidence of occupation to North Street can be found at Mildmay Road, a few hundred metres to the south-west, and consists of a few pottery sherds of Late Bronze Age or Early Iron Age date (Greenwood & Maloney 1993, 79). More substantial evidence can be found at Marks Warren Farm on Chadwell Heath, less than 2km upstream on the River Rom, where substantial quantities of pottery, dated to the 6th century BC, were dumped into the almost silted-up ditches of a large Late Bronze Age enclosure (Girardon & Heathcote 1989, 74; Greenwood *et al* 2006). It would appear that the enclosure was used, or at least known of, at this time, and the pottery may have acted as a 'closure deposit' linked to the end of its use. Other features recorded indicate the presence of an extensive settlement in the enclosure's vicinity. Further to the west, at Fairlop Quarry, a settlement associated with a substantial rectangular enclosure was established during the Middle Iron Age (Greenwood & Maloney 1995, 346). The most notable site of this period, however, must be the extensive and impressively constructed enclosure at Uphall Camp, located beside the River Roding *c*.8km to the south-west of North Street. This is the largest defended settlement in the London region and contained numerous roundhouses and a wide range of ancillary buildings, although settlement here may be slightly later in date than the occupation at North Street (Greenwood 1989; 2001).

To the east of Romford, evidence of Middle Iron Age settlement has been identified alongside the River Ingrebourne at Maybank Avenue in Hornchurch, which consisted of a roundhouse that was rebuilt on three occasions, alongside a possible droveway and many pits (Greenwood & Maloney 1993, 78; 1994, 204). On the gravel terraces to the east of the River Ingrebourne widespread evidence of Early and Middle Iron Age activity has been found (Greenwood *et al* 2006). Occupation has been identified at Hunt's Hill Farm, where an extensive settlement, consisting of at least ten roundhouses, a rectangular post-built building and a number of pits and ditches, has been dated to perhaps the 7–6th century BC (Filer 1991, 303; Greenwood & Maloney 1994, 205; Greenwood *et al* 2006). This was followed by further activity, including the construction of a six-post structure, apparently of Middle Iron Age date (Greenwood & Maloney 1993, 79). To the south of these, at Moor Hall Farm, a small settlement or farmstead dated to the Middle Iron Age was revealed (Greenwood *et al* 2006), whilst to the north of this, at Manor Farm, excavations produced evidence for a further Early to Middle Iron Age settlement (Richardson 1984, 387).

It is clear that during the Early and Middle Iron Age settlement on the north-east London terraces was not nearly as ephemeral as once thought, even if it remains overshadowed by the archaeological evidence from the periods pre- and post-dating it. Settlement patterns and the organisation of agricultural production were undoubtedly changing during the earlier parts of the Iron Age, but this may not have been as socially and economically disastrous as is implied solely by the sheer weight of archaeologically visible remains. In many areas of Lowland Britain there is evidence to suggest that farming practices may even have intensified during this period, despite much less energy

and fewer resources being expended on defining fields with ditches and demarcating the landscape, practices that may have been more about visual symbolism than practical utility (Bradley 2007; Yates 2007). Within the London region there is some evidence that during this time settlement was actually expanding into some of the more marginal lands bordering the fertile terraces (Nielson 1996; Hawkins & Leaver 1999). It appears that instead of a widespread decline in occupation, there may have been reorganisation away from the extensive, specialised and perhaps centrally-organised agricultural landscapes of the Late Bronze Age and towards a pattern of relatively locally-organised, smaller scale and more mixed farming settlements (Merriman 2000, 45). The associated social structure may have been reoriented towards community organisation rather than élite control — a structure that no longer depended on the large-scale division of the landscape or the deposition of vast quantities of metalwork in order to function, and would therefore be less archaeologically visible (Bradley & Yates 2007). Rather than seeing the Early and Middle Iron Age in terms of a dearth in activity, it may be more profitable to understand this period as one of important cultural and social change (Haselgrove & Pope 2007, 1).

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bvfj@tinyworld.co.uk

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