Chapter 10: Overview

by Dan Stansbie, Paul Booth and Seren Griffiths

LATE MESOLITHIC ACTIVITY *by Seren Griffiths and Dan Stansbie*

The landscape context

Late Mesolithic activity defined by the presence of diagnostic flint was relatively widespread within the M1 widening corridor. Late Mesolithic/early Neolithic flint was found at Junction 8N, Junction 8S and Area P, but this material was all residual within later features, or distributed within the topsoil. The only evidence for *in situ* late Mesolithic activity came from Junction 9. Despite the lack of evidence for definite late Mesolithic settlement (except at Junction 9) from the M1 widening sites, which represent a relatively large excavated area, there is good and widespread evidence for similar settlement within the wider locality (Holgate 1995b, 8). Late Mesolithic sites in the region are located in the principal river valleys which cut the Chiltern dip slope from north to south, including the Ver valley (ibid.). Five sites (Stratford's Yard, Chesham; Redbourn; Low Farm, Fulmer; Gerrard's Cross; and Tolpit's Lane Site B, Moor Park) have produced substantial *in situ* assemblages of flint (ibid.). The site at Tolpit's Lane produced over 2000 flints, along with wild cattle and deer remains and carbonised hazelnut shells. Charcoal from the site was radiocarbon dated to 4380 ± 80 BC. At Stratford's Yard in the Chess valley a land surface buried by colluvium had a concentration of flint-working debris lying on it and a pit, possibly with a post-pipe, was cut into the same surface (Stainton 1989, 50). Artefacts from this site included an assemblage of 4000 flint tools, including narrow blades, and bones of wild cattle (one of which produced a radiocarbon date of 3940 ± 100 BC), red deer, pigs and charred hazelnut shells. Other late Mesolithic sites in the Ver valley include settlement at Redbourn and Friar's Wash (Holgate 1995b, 9).

It is therefore clear that late Mesolithic settlement was extensive in the region and that the people visiting the sites along the M1 widening corridor may have existed in what was, for the late Mesolithic period, a relatively densely utilised landscape. However, given the relatively poor chronological resolution of these sites in comparison to that from Junction 9, it is impossible to say whether or not they were in fact directly contemporaneous.

6th- and 5th-millennium pit sites in England and Wales

Allen and Gardiner (2002) have reviewed the evidence for Mesolithic pits in the south of England and to these features can be added recently excavated sites in the south, and several northern sites. Allen and Gardiner (ibid.) suggested that features, such as the pits located within the Stonehenge car park and those from the Dorset cursus area, could be evidence of early monumentalisation of landscape prior to the construction of 'Neolithic' megalithic and non-megalithic structures. Less certain examples of 'pits' have been recorded at Hambledon Hill (cf Mercer and Healy 2008). Monumentalisation of aspects of the 'natural' world is concurrent with Bradley's (2000) thesis of a changing conceptualisation of landscape. Evidence for posts, rather than pits, is not always present, and many examples of cut features might be better understood as fire pits or hearths. Several smaller Mesolithic pits, such as at March Hill Carr (Griffiths in prep.), Kingsdale (Howard 2007) and on the A30 in Cornwall (Griffiths 2006) contain significant quantities of burnt flint, and it may be that processing flint was part of these features' purposes.

Site layout and organisation

Site layout and organisation cannot be considered at sites other than Junction 9, as activity at the other sites was represented by flint scatters which were residual in later features. However, low-level late Mesolithic/early Neolithic activity was fairly widespread across the landscape examined during the M1 widening.

The late Mesolithic activity at Junction 9 consisted of the excavation of at least seven pits and three gullies and their subsequent backfilling with cultural material comprising flint-working debris, diagnostic flint tools and charred hazelnut shells. However, these features were part of a much larger pit group, comprising 69 pits and two gullies, some of which produced undiagnostic flint-working debris. The late Mesolithic activity could therefore have been much more extensive than the minimum number of ten features would suggest. The dating of these features has been established by a series of radiocarbon dates (see Chapter 9) and by the presence of diagnostic artefacts. Contemporary

chronometric data have been produced from several pits recently excavated at Gobowen, Shropshire (L Hayes pers. comm.).

Bayesian modelling of the radiocarbon dates from these features suggests that late Mesolithic activity probably took place over a period of 100 years, but could have taken place over a period of less than ten years during the 52nd century cal BC (see Chapter 9). Given this dating evidence and the fact that the dated features were relatively dispersed throughout the larger pit scatter, it seems likely that they represent several discrete episodes of activity. Their proportions, proximity and number might suggest repeated occupation, with groups of people moving into the area and stopping to create and repair tools and consume wild resources, and then moving on. Alternatively, there is the possibility that all of this activity represents a single archaeological phase, perhaps with spatially zoned tasks, or areas of activity. The presence of a possible post-pipe in one of the pits (2110) would seem to argue for a greater degree of permanence, but this possible posthole does not appear to be part of any coherent pattern of pits or postholes, whether dated to the late Mesolithic or not, that might form a structure. Furthermore, the dimensions of the M1 widening pits make it unlikely that these features are 'monumental' in the sense implied by Allen and Gardiner (2002).

The majority of the late Mesolithic pits had a single fill, although pits 2094 and 2064 each had two fills. Flint-working debris, flint tools and hazelnut shells were distributed evenly throughout the fills of all the features and there was no evidence for any of the artefacts or ecofacts having been deliberately placed. This suggests that the material was incorporated into the fills as part of a soil matrix and, given its state of preservation, it seems likely that this was secondary deposition, after initial discard on the ground surface. A similar process is argued to have occurred at the early Neolithic site of Kilverstone, Norfolk (Garrow *et al.* 2005). At this site, the material which formed the basis for the pit fills is characterised as 'mess' rather than midden material, although it is acknowledged that the concept of a midden may be appropriate (ibid., 150) in some ways. The hazelnuts at Kilverstone were also sometimes found within charcoal-rich lenses (ibid., 144), a characteristic that is used to argue for the backfilling of the pits with dumps of cultural material, which is missing from the Junction 9 pits. However, differences in soil conditions, or taphonomic factors, could account for this absence. The evidence from Kilverstone suggests repeated visits to the site by a mobile group or groups of people (ibid., 155) and a similar scenario can perhaps be envisaged at Junction 9 (see above), with the difference between a Mesolithic and a Neolithic way of life (ie lack of pottery at Junction 9), the presence of domesticated animals/crops at Kilverstone, and possibly greater numbers of people, accounting for the differences in density of material culture accumulated.

Subsistence and economy

Unfortunately, evidence for subsistence and economy is limited to flint tools and flint-working debris and hazelnut shells, with no faunal remains or other environmental indicators available. The presence of scalene triangles, amongst the flint assemblage, indicates the repair and/or the manufacture of hunting tools and the hazelnut shells demonstrate the gathering and use of wild resources. The quantities of flint recovered (see Chapter 7) perhaps indicate a relatively long-term occupation for purposes of rest and retooling, rather than a short-term 'hunting camp'. The kinds of tools manufactured at Junction 9, however, (ie blades, scalene triangles and an obliquely blunted point) might be argued to represent evidence for a 'hunting camp'. Given this, perhaps, it would be better to see the evidence as representing a variety of different activities, which could occur in particular parts of the landscape, but could equally occur within the same locale, as proposed for early Mesolithic activity in the Vale of Pickering (Conneller and Schadla-Hall 2003).

Scalene microlith chronology

In 1979, Switsur and Jacobi wrote their seminal analysis of microlith typologies, in which they defined a number of spatially and temporally transgressive microlith clusters. The M1 microlith assemblage is dominated by scalenes, with a few probable rods. We may, in this sense, define it as one of Switsur and Jacobi's (1979, 47) cluster B sites which were '…distributed over southern England' and which chronologically 'cover the time period 6500 B.C. (Broomhill, Hampshire) to the end of the Mesolithic'. Switsur and Jacobi's (ibid.) also suggest that, 'in addition to possessing numerous later microlith shapes (classes 5-8, occasionally 9), the sites retain a noticeable, often high, proportion of early microlith shapes…'. As a later cluster B site, the M1 could also overlap temporally with the Pennines scalene dominated sites such as March Hill Carr, Pule Bents and other Pennines sites (Griffiths in prep.).

The only other English sites which have robustly dated later microlith assemblages, are rod-dominated March Hill Top (ibid..), and the scalene assemblage from March Hill Carr (ibid.). The temporal difference between these results could be evidence of changes in regional styles of lithic technology, or represent chronological development. Switsur and Jacobi (1979, 45) classified their scalene-dominated March Hill II and Lominot sites as cluster D because of the Pennines and Clevelands typology, raw material and relative absence of rods. Clearly two well-dated sites do not provide an adequate or robust sample for these cluster types or scalene typology.

Other sites with radiocarbon dates (Table 10.1), stratigraphically associated with apparently later scalene dominated assemblages are Windmill Farm (cf Smith 1984, 179), Dean and Dan Cloughs (Griffiths in prep.), Lominot IV (Switsur and Jacobi

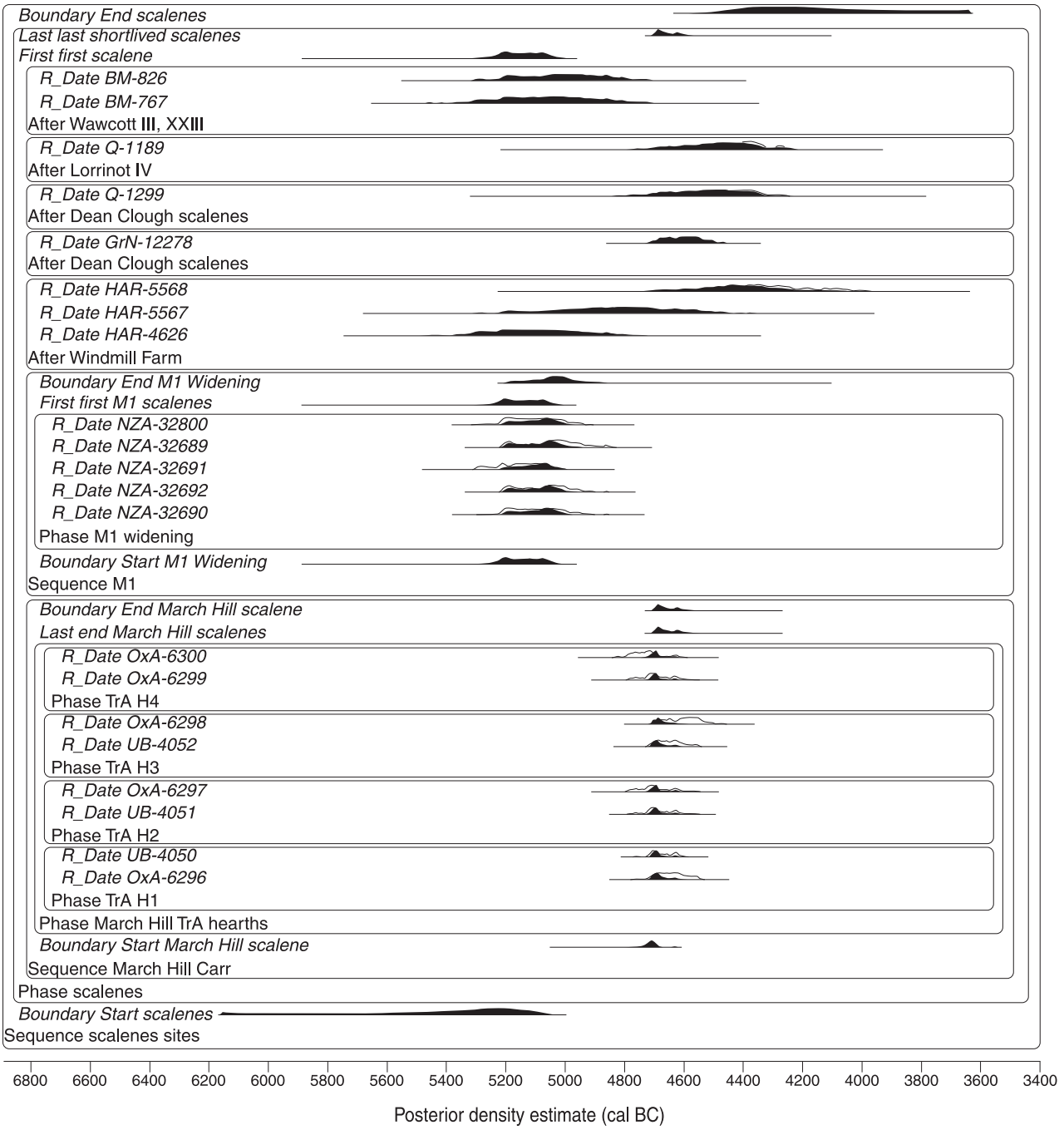

Fig. 10.1 Probability distributions associated with scalene triangle assemblages

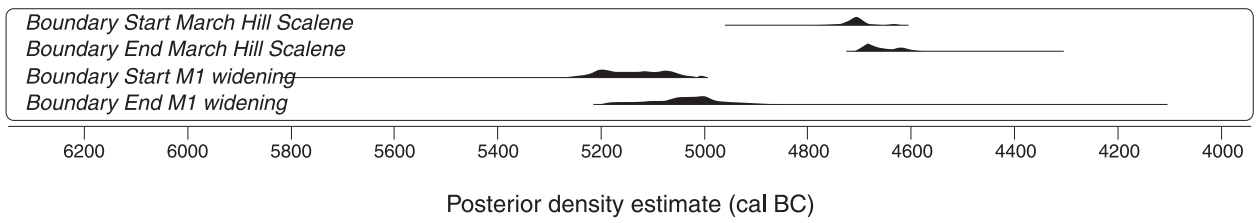

Fig. 10.2 Probability distributions for estimated first and last use of scalene microliths

1975; Griffiths in prep.) and Wawcott III and XXIV (Froom 1976, 164). Unfortunately, the radiocarbon results from these sites have poor association with any archaeological event in the published sources. Furthermore, the radiocarbon dates from these sites were produced on unspeciated charcoal of uncertain maturity or on oak charcoal. These results could all have inbuilt age offsets (ie have been derived from old wood), between the archaeological event (ie the gathering of the wood for fuel) and the radiocarbon age of the material. In the model comparing the scalene chronologies, these results are used as *termini post quos*; effective likelihoods on the last dated event associated with scalene use, but not effective on the earliest dated event associated with scalene use. The data from Broom Hill (O'Malley and Jacobi 1978) are not discussed, because it is not possible, from the published report, to associate radiocarbon results with microliths. Other sites exist with poorly understood associations between radiocarbon samples and later Mesolithic material culture (cf Gardiner nd). Together with the data from the March Hill Carr hearths, the Junction 9 pits are arguably one of only two well-understood, chronometric assemblages associated with scalene triangle use in England. These two sites currently provide the chronometric end points for scalene use. Junction 9 provides the earliest accurate estimation for scalene triangle use in England of *5220-5060 cal BC* (68.2% probable; first scalene; Figs 10.1-2). The last accurate dated event associated with scalene triangle use is provided by the March Hill Carr estimate of *4710-4610 cal BC* (68.2% probable; end March Hill scales; Figs 10.1-2). Together these sites demonstrate that scalene triangle dominated assemblages were in use at least for some *390-570 years* (68.2% probable; duration scalenes; Fig. 10.3).

Wider social networks

The majority of evidence for Mesolithic occupation in England derives from surface collected lithic scatters and stratified deposits or material from features is significantly rarer. The proximity of the features at Junction 9 might suggest an area favoured either by a group of people or repeatedly visited over a period of time, perhaps seasonally. Interpretation of Mesolithic settlement evidence has predominantly followed the thesis of Clark (eg 1954), who suggested a transhumance model, intimately linked with resource scheduling. Recent critiques have attempted to deconstruct this model, emphasising the complexity of an 'economic' model (eg Joachim 1976), variability in ancient animal and plant populations (Carter 2001), and the limitations of seeing Mesolithic populations as predominantly semi-nomadic microlith-wielding hunters (Clarke 1976; Finley 2006; Conneller 2005). Evidence for repeated occupation at sizeable early Mesolithic structures in favoured locations, such as Howick (Waddington *et al*. 2003) and East Barns (Gooder 2007), also forces us to problematise the nature of occupation and the structures which are envisaged (cf Taylor and Gray Jones 2009). It is notable that most Mesolithic structural evidence from England seems to be associated with much earlier Mesolithic activity. It is from pit or posthole sites, such as those discovered at Junction 9, that the evidence for later Mesolithic occupation is derived.

The absence of structural settlement evidence in England is especially pertinent when the range of later Mesolithic Continental examples is compared. These include stone-built hut-rings, and stake-built structures presumably associated with organic covers. Grøn (2003, 688) has also emphasised that even considerable wooden structures may leave very limited earth-fast features.

The Junction 9 features are nationally important because of their contribution to the chronology of later Mesolithic tool typologies and the probable demonstration of repeated occupation of favoured locales (cf Wickham-Jones 2005). The location of the Junction 9 pits, at the head of a now dry valley, might provide some indication of natural features that drew people repeatedly to this place. Barton *et al*. (1997) have emphasised that as well as more utilitarian resources, Mesolithic people created 'persistent places' because of socialised interactions with their landscape (cf Pollard 2000). Whether this site represents the deposition of material in pits by a large group of people occupied in retooling, or the repeated revisiting of the location over several generations, the Junction 9 Mesolithic pits are rare indications of the complex relationships that Mesolithic people engaged with over the course of their lifetimes.

EARLY NEOLITHIC ACTIVITY *by Dan Stansbie*

Stratified evidence for early Neolithic activity was restricted to a single pit (5081) from Junction 8S. The pit lay in the southern central part of the site, and

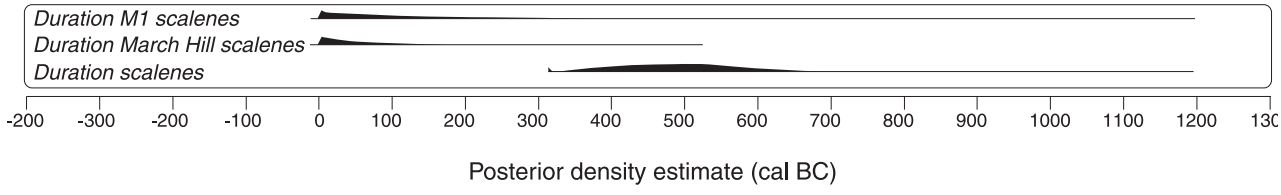

Fig. 10.3 The duration of use of scalene triangles as calculated from the parameters shown in figure 10.1

Table 10.1: Comparative radiocarbon data

Site	*Lab code*	*Context and sample*	*Material*	*Description*	*δ13C*	*14C age BP*	*Calibrated date range*
March Hill Carr	OxA-6296	Fill of hearth 1, trench A, defined by a circle of stones, overlain by peat	*Corylus avellana* charcoal	The hearth contained flakes consistent with the refitted assemblage. Dates firing of hearth and ?production of lithic assemblage (English Heritage unpublished data; Griffiths in prep.).	-24.4	5790±35	
March Hill Carr	UB-4050	Fill of hearth 1, trench A, defined by a circle of stones, overlain by peat	Hazel/ *Prunus* sp. charcoal	The hearth contained flakes consistent with the refitted assemblage. Dates firing of hearth, and ?refitting flints (English Heritage unpublished data; Griffiths in prep.).		5813±22	
March Hill Carr	UB-4051	Hazel charcoal sample taken from the fill of hearth, Tr. A H2, composed of a circle of built-up stones, sealed under 40-50cm peat	*Corylus avellana* charcoal	The hearth is of a similar style to those previously dated by Switsur (Q-788), which was probably adjacent to this area. Dates firing of hearth (English Heritage unpublished data; Griffiths in prep.).		5824±28	
March Hill Carr	OxA-6297	Hazel charcoal sample taken from the fill of hearth Tr. A H2 composed of a circle of built-up stones. Sealed by 40-50cm peat	*Corylus avellana* charcoal	The hearth is of a similar style to those previously dated by Switsur, which was probably adjacent to this area. Dates firing of hearth (English Heritage unpublished data; Griffiths in prep.).	-24.4	5835±35	
March Hill Carr	UB-4052	Hazel charcoal sample located within hearth Tr. A H3; an oval pit. Contained a scalene triangle, and was surrounded by a scalene triangle assemblage	*Corylus avellana* charcoal	The association suggests hearth date contemporary with scalene production. Dates firing of hearth; ?date of scalene manufacture (English Heritage unpublished data; Griffiths in prep.).	-26.8±0.2	5796±29	
March Hill Carr	OxA-6298	Hazel charcoal sample located within hearth Tr. A H3; an oval pit. Contained a scalene triangle, and was surrounded by a scalene triangle assemblage	*Corylus avellana* charcoal	The association suggests hearth date contemporary with scalene production. Dates firing of hearth; ?date of scalene manufacture (English Heritage unpublished data; Griffiths in prep.).		-24.6	5745±35
March Hill Carr	OxA-6299	Hazel charcoal sample from Tr. A H4; a very small pit, filled with charcoal. Burnt flints were collected from the hearth fill. The burning of the flint might be part of a deliberate pretreatment process	*Corylus avellana* charcoal	Dates firing of the hearth and burning of flints (English Heritage unpublished data; Griffiths in prep.).		-25.3	5830±35
March Hill Carr	OxA-6300	Hazel charcoal sample from Tr. A H4; a very small pit, filled with charcoal. Burnt flints were collected from the hearth fill. The burning of the flint might be part of a deliberate pretreatment process	*Corylus avellana* charcoal	Dates firing of hearth and burning of flint (English Heritage unpublished data; Griffiths in prep.).		-26.0	5855±40
Dean Clough SE 0065 812715	GrN-12278	The date material came from the floor of a definite hearth with a flagged floor; scalene triangles were recovered from the site	*Quercus* sp. charcoal	TPQ firing of hearth, and ?use of scalenes (Smith–Deenen pers. comm. 2009 Unpublished data; Griffiths in prep.).		5750±50	4720–4460 cal BC
Dean Clough SD 9949 1289	Q-1299	Charcoal from a hearth, collected from three squares of the excavation area (Stonehouse 1986, 8)	Bulk charcoal	The site produced 932 flints; 13 were identified as scalene triangles. Micro burins and cores were also recovered. Conjoining pieces (109 in total) were identified, and knapping debris suggests *in situ* working (Griffiths in prep.). ?TPQ firing of hearth, and flint working		5645±140	

Table 10.1: Comparative radiocarbon data – continued

Site	*Lab code*	*Context and sample*	*Material*	*Description*	*δ13C*	*14C age BP*	*Calibrated date range*
Windmill Farm	HAR-4626	A number of features produced a lithic assemblage including scalene triangles, lancolate, straight-backed and obliquely backed pieces.	Charcoal	Date is ?TPQ for burning and lithic assemblage (Smith 1984, 179).		6160±150	
Windmill Farm	HAR-5567	A number of features produced a lithic assemblage including scalene triangles, lancolate, straight-backed and obliquely backed pieces	Charcoal	Date is ?TPQ for burning, and lithic assemblage (Smith 1984, 179).		5920±180	
Windmill Farm	HAR-5568	A number of features produced a lithic assemblage including scalene triangles, lancolate, straight-backed and obliquely backed pieces	Charcoal	Date is ?TPQ for burning and lithic assemblage (Smith 1984, 179).		5510±150	
Lominot IV	Q-1189	? A scalene-dominated assemblage not fully reported by Switsur and Jacobi (1975)	?	TPQ uncertain activity (Switsur and Jacobi 1975; Griffiths in prep.).		5610±120	
Wawcott III	BM-767	Base of pit 2; associated with a dominance of scalenes over isosceles forms	Charcoal-carbonaceous material, including hazel nutshells	TPQ infilling pit, and deposition numerous Mesolithic flints including microlith points, triangles, crescents and rectangles, distinct from Thatcham industries (Froom 1976, 160)		6120±134	
Wawcott XXIII	BM-826	Hearth associated with Mesolithic flint industry including scalene triangles similar to that of Wawcott III	Charcoal	?TPQ infilling pit, deposition scalenes? (Froom 1976, 164)		6079±113	

was shallow, with a flat base. The pit fill produced a radiocarbon date (NZA-32714) of 3780-3640 cal BC (95.4% confidence; or 3760-3650 cal BC, 68.2% confidence) on burnt animal bone and also produced worked flint. A single pit cannot be taken as evidence of settlement, but it does show a human presence in the area in the early Neolithic, and the presence of burnt animal bone suggests that people were in the area long enough to accumulate and burn occupation debris. The fragmented nature of the animal bone suggests that it was not a placed deposit. In addition, unstratified worked flint from Junction 8S, Junction 8N and Area P indicates possible early Neolithic activity (see Chapter 7), but this material is all residual in later features or stratified in the topsoil (see late Mesolithic activity above) so its significance is uncertain.

LATER NEOLITHIC AND EARLY BRONZE AGE ACTIVITY *by Dan Stansbie*

The landscape

Definitive evidence of late Neolithic-early Bronze Age activity within the M1 widening corridor was scarce, but four pits from the excavations at Junction 9 are dated to the late Neolithic period. Three of these are dated on the basis of late Neolithic worked flint from their fills and one (pit 2052) was dated on the basis of a fragment of hazelnut shell from its secondary fill, which produced a radiocarbon determination (NZA-32683) of 2620-2340 cal BC (95.4% confidence; or 2570-2460 cal BC, 68.2% confidence). In addition, five pits (5064, 5088, 5096, 5172 and 5226) from Junction 8S were possibly of Neolithic to early Bronze Age date on the basis of worked flint from their fills or, in the case of pit 5226, burnt unworked flint. Finally, undated pits from the Aubreys produced worked flint of late Neolithic-early Bronze Age date, raising the possibility that they may date to this period, a suggestion supported by the occurrence of eight small sherds of pottery from one of these pits. These were not closely dated, but a late Neolithic-Bronze Age date is suggested by Webley and Brown (see Chapter 7). The occurrence of the flint, in particular, recalls the evidence for Neolithic flintwork recorded in earlier work at this site (see Chapter 1).

Site organisation

Like the scatter of late Mesolithic pits described above the late Neolithic pits from Junction 9 were part of a scatter of 69 pits and two gullies, many of

which could have dated either to the late Mesolithic or the late Neolithic periods. However, on their own the late Neolithic pits represent evidence for limited late Neolithic settlement activity, relating to a small group, or groups of people moving through the landscape. These pits may have related to very similar activity to that described for the late Mesolithic (see above). The presence of flint-working debris, along with tools, burnt flint and hazelnuts from throughout the pit fills, indicates, as with the Mesolithic pits, that the material had been introduced into the pits as part of a soil matrix and probably therefore represents secondary deposition of material originally deposited on the ground surface. Similarly, possible late Neolithic-early Bronze Age pits from Junction 8S and The Aubreys may relate to relatively short-lived occupation by mobile groups, with the dispersed nature of these pits indicating more than one occupation event.

Subsistence and economy

As with the late Mesolithic evidence, the lack of faunal remains and environmental indicators (apart from hazelnuts) makes the drawing of inferences about subsistence and economy problematic. However, the presence of flint tools and hazelnut shells at Junction 9 indicates repair and/or manufacture of tools and the consumption of wild resources. The presence of burnt flint also suggests that any occupation lasted long enough for the accumulation and burning of debris. Similar activities can be imagined taking place at Junction 8S and The Aubreys, although at these sites the hazelnut shells are absent.

LATER PREHISTORIC ACTIVITY *by Dan Stansbie*

Distribution of evidence

Evidence for later prehistoric activity along the route of the M1 widening corridor was limited. Much of it came from the vicinity of Junction 8, with the great majority from Junction 8S, where scattered isolated pits, along with two more substantial groups of pits, two four-post structures and two unurned cremation burials, provided evidence of fairly dispersed settlement over a wide area dating to the late Bronze Age-early Iron Age. This is very much in keeping with evidence from elsewhere in the area (R Niblett pers. comm.). A scatter of late Bronze Age-early Iron Age pottery, intrusive in the upper fills of Mesolithic and Neolithic pits at Junction 9, attests to limited activity of that date in this area and four pits, and a short stretch of ditch, also dating to the late Bronze Age-early Iron Age were excavated during a watching brief at the Buncefield Depot, to the north of Junction 8. Some residual late Bronze Age-early Iron Age and middle Iron Age pottery was also found in the late Iron Age-early Roman features at Junction 8N (see Chapter 3). Excavation of the outer ditch of the hillfort at The Aubreys provided no dating evidence, but the ditch is assumed to be of Iron Age date by association with the hillfort.

Site organisation

The evidence from Junction 8S suggests that late Bronze Age-early Iron Age activity was distributed across the excavated area fairly widely, but also fairly thinly. The main concentrations of activity comprised two groups of pits, located in the north-western corner (7785) and in the north-eastern part (7786) of the site. Both pit groups produced moderate amounts of late Bronze Age-early Iron Age pottery and also worked flint, and to judge from their profiles represent shallow scoops dug for the deposition of rubbish, or possibly midden material (see Chapter 7). Other isolated pits, a gully and a tree-throw hole were scattered across the area, representing similar activity. Two post-built structures, presumably for crop storage, were found in the south-eastern corner of the excavation area and two cremation burials, probably relating to the same settlement, were placed in the south-western and north-central parts of the site respectively. The lack of evidence for structures, apart from the four- and five-post storage structures (see above), requires some explanation and is perhaps best accounted for by truncation from medieval and later ploughing which, judging from the shallowness of many of the features, was severe enough to entirely remove shallow postholes and other features. Overall the evidence suggests that a small-scale late Bronze Age-early Iron Age farmstead was present at Junction 8S. The small scatter of pits and single ditch from the Buncefield Depot watching brief may perhaps have been part of the same dispersed settlement, but the character of the feature assemblages there suggest a different type of activity from that indicated at Junction 8S.

Late Bronze Age-early Iron Age settlement is reasonably well known in the Chilterns and such settlements have been excavated at Puddle Hill, Foxholes Farm, Cole Green, Pea Lane and Bottom House Lane (Bryant 1995, 19), and also include the hillfort at Ivinghoe Beacon (Cotton and Frere 1968). Much closer, at Buncefield Lane, Hemel Hempstead, pits, postholes, a ditch and a buried soil horizon were dated to the late Bronze Age/early Iron Age (McDonald 2003, 51). Similar sites have also been excavated along the route of the Berkhamsted to Kings Langley bypass. These include ditches, pits and three possible rectangular post-built structures at Rucklers Lane, late Bronze Age-early Iron Age pits, postholes and ditches near Wood Lane End and two late Bronze Age round-houses and eight four-post structures at Oakwood, Berkhamsted (McDonald 1996). In addition, a late Bronze Age roundhouse was excavated in Westwood Quarry, about 500m west of The Grove site near Watford. Environmental evidence from this site suggests arable farming, with finds of emmer

emmer and barley, but no field systems were identified (R Niblett pers. comm.). These settlements (with the exceptions of Buncefield Lane, Rucklers Lane and Wood Lane End) all produced evidence of circular post-built structures, which were absent from the Junction 8S site. However, all the extensively excavated sites of the period also produced four- and six-post granaries, which can be paralleled at Junction 8, although only one site (Totternhoe) had any form of enclosure (Bryant 1995, 19). This evidence suggests a fairly extensive population at least on the valley slopes and plateau edges, but not occupation of such density or character that regular definition of sites with enclosures was required.

The small amount of late Bronze Age-early Iron Age pottery from Junction 9, mostly intrusive in the tops of the fills of earlier prehistoric features, suggests the possibility of similar settlement activity at this site, but in this case the extensive Roman activity in the area may have obliterated all trace of features related to such settlement. Activity at The Aubreys, possibly but not demonstrably of this date, was also restricted to pits and postholes, but with an absence of any coherent structures. Although the presence of a hearth among the northernmost group of pits suggests that this activity was related to settlement, the quantity of material culture recovered was exceedingly small and the date of the hearth is very uncertain.

Site economies and diet

There was no direct evidence for late Bronze Age-early Iron Age economy or diet, as no faunal remains or other environmental remains were recovered.

Ritual and burial practices

There is no evidence for later prehistoric structured deposits from either Junction 8S or The Aubreys. Two pits from Junction 8S (5023 and 5106) produced sherd groups representing fragments of single vessels, but their degree of fragmentation suggests that they were deposited as part of a backfill of midden, or occupation soil (see Chapter 7), and the lack of large volumes of animal bone, human bone and small finds from any of the deposits would seem to support this argument (although the general scarcity of bone is also in part a consequence of poor-preservation conditions). At Buncefield Depot two further pit groups contained notable concentrations of sherds, including a large part of a single early Iron Age vessel in pit 532. It is possible that the latter represents some kind of structured deposit, but there was no other associated material that might have shed further light on this possibility.

The evidence for burial practices is limited to the two late Bronze Age cremation burials (5066 and 5244) also from Junction 8S. A single unurned cremation burial (5066) occurred in the south-western corner of the site and produced a radiocarbon date (NZA-32713) of 1380-1090 cal BC (95.4% confidence; or 1270-1130 cal BC, 68.2% confidence) and a second unurned cremation burial (5244) was found in the northern central part of the site, producing a radiocarbon date (NZA-32715) of 1130-900 cal BC (95.4% confidence; or 1050-920 cal BC, 68.2% confidence). It is now widely acknowledged that there was a tradition of cremation burial without grave goods in late Bronze Age southern England and that these are typically found singly or in small groups (Webley *et al.* 2007, 139). The examples from Junction 8S are paralleled in Hertfordshire at Gadebridge (Bryant 1997) and more widely in southern England (Webley *et al.* 2007, 139). Of the two radiocarbon dates from Junction 8S only the second, from cremation 5244, falls within the 11th-9th-century cal BC date range expected for such burials (ibid.), with the first example falling somewhat earlier, within the 13th-12th centuries cal BC. However, both seem to fit within the tradition of late Bronze Age cremation burials in all other respects, although the dates of their deposition were probably significantly different.

Wider social networks

In view of the lack of evidence for substantial late Bronze Age-early Iron Age activity within the M1 widening corridor from anywhere other than Junction 8S, assessing the place of the settlement within the wider contemporary community is problematic. It is possible that the earliest occupation of The Aubreys overlapped chronologically with early Iron Age occupation at Junction 8S, but given the lack of dating evidence from the excavation at The Aubreys, and the late Bronze Age radiocarbon dates from Junction 8S, this must remain speculative. If the two sites were contemporary at any point then it might be argued that The Aubreys served as a centre for ritual and communal activities, which may have involved people from the Junction 8S site, only *c* 3.5km distant. Although perhaps in large part a consequence of the paucity of excavation, the absence of evidence for sustained settlement within The Aubreys may suggest only sporadic occupation. Its siting between two dry valleys, which may have had at least seasonal streams in the past, may have lent significance to its location. Evidence for status, or hierarchy, at Junction 8S is lacking, with the material culture assemblages not showing any particular characteristics that can be readily interpreted in these terms, nor any differentiation between different parts of the site. Lack of evidence for buildings also makes status differences difficult to address, but the absence of enclosure ditches may suggest a lack of differentiation. The evidence for possible later prehistoric settlement at The Aubreys is even more problematic, with the extreme paucity of the

material culture assemblage making inferences about status and hierarchy, or exchange, impossible to sustain, and even its chronology quite uncertain.

LATE IRON AGE AND ROMAN ACTIVITY

by Dan Stansbie and Paul Booth

Settlement pattern

The majority of evidence for Roman activity along the route of the M1 widening corridor came from Junction 8N and Junction 9, where enclosures, boundary ditches and corn drying ovens indicated relatively intensive agriculturally related activity, with pits and smaller ovens within enclosure 7700 at Junction 8N possibly indicating domestic occupation. Evidence for Roman activity was also uncovered at Areas M and P, Junction 10 and Junction 8S. Ditches at Area M represented agricultural activity dating to the early Roman period, while similar activity from Area P dated to the middle Roman period. At Junction 10, a fenceline was tentatively assigned to the late Iron Age-early Roman period and at Junction 8S a sub-rectangular enclosure and a ditch produced early-middle Roman pottery. At The Aubreys, ditches of a possible field system respecting the position of the earthworks may also have been of Roman date.

Evidence for the intensity of occupation in this period in the wider landscape beyond the M1 corridor is variable. There is little evidence for the immediate impact of the Roman conquest in the Verulamium hinterland, with the majority of settlements continuing from the late Iron Age until the early 2nd century, when settlement shift occurred (eg Niblett 2005a, 156). Pollen evidence from the Ver floodplain and from the fill of the mid-1st-century funerary shaft at Folly Lane indicates a largely agricultural landscape with only remnant woodland, and animal dung and trampled soil from the same feature suggest the presence of stockyards (Niblett 1999, 62). At a slightly later date evidence from villas in the area supports the view that the rural economy was dominated by mixed farming. There is some evidence for agricultural exploitation in the form of rectangular fields and trackways to the south of Verulamium, known from aerial photographs and from archaeological evaluations, at Smallford Farm, Jersey Farm, Turners Farm and Fairfolds Farm, Sandridge, although at the first two sites the evidence is undated and at all four it is fragmentary. Field boundaries to the north of Verulamium, which run at right-angles to the line of Watling Street, may also be Roman in date (R Niblett pers. comm.). Williamson (2000, 146, fig. 24) has suggested that field layouts on the line of the watershed between the Ver and the Gade predate the Norman conquest, although there is no firm evidence of a Roman date for these features. Williamson's (2010, 185) recent expansion of his earlier work gives a more nuanced approach to the chronology of 'relict field systems', suggesting that these '…probably have complex origins. Rather than dating from a single "period", they are the result of many centuries of development, and their distinctive form is largely a consequence of the natural topography'. Such evidence does not permit the reconstruction of wide-ranging field systems of Roman date, although the existence of such systems is very probable.

Excavated lower-status rural sites and farmsteads belonging to the Roman period are rare in the vicinity of the M1 corridor, although such sites have been more extensively investigated in the immediate vicinity of St Albans. This pattern may be attributable to a long-standing tradition of archaeological research with both methods and priorities which, until relatively recently, have favoured work on villas at the expense of other settlement types, although extensive truncation due to medieval and post-medieval ploughing in the Verulamium hinterland may also have contributed to the pattern of data in this area. Rural settlement is, however, known from Harpenden, Redbourn, Kettlewells and Bladder Wood (Hunn 1995a, 84). Sites with evidence for masonry buildings include Old Jeromes West, 0.5km north of Gorhambury, and a rectangular enclosure at Prae Wood (ibid., 83), as well as the possible structure in the vicinity of Junction 8 (see above). The character of this last group of sites is uncertain, however, and evidence to confirm or contradict their definition as distinct from villas is lacking. The wider landscape of the Chiltern dip slope was fairly densely settled. A survey of north-west Essex estimated 1.3 Roman settlements per square km (Williamson 1984, 228) and Hunn (1996, 52) recorded 43 settlements, over 40 square miles, near Stevenage. However, Roman sites recorded along pipeline easements in the St Albans area and along the Kings Langley to Berkhamsted bypass are comparatively scarce and this may suggest that the boulder clay areas of north-east Hertfordshire were more agriculturally attractive than the clay- with-flints areas, which cover much of the dip slope further to the south (eg Williamson 2010, 64-6). In several areas, for example Ashridge and Berkhamsted golf course and Marshalls Heath Wood, Wheathampstead, which have been woodland since the medieval period and therefore not ploughed, Roman, or at least pre-medieval, enclosure banks survive. Earthworks also survive at Piggott's Hill Wood, Harpenden, and excavations at Aldwickbury golf course nearby heave revealed a trackway, an enclosure and three ovens dating to the Roman period (West 2008, 15), suggesting a low-status settlement at this site as well.

Evidence for religious sites in the landscape includes the temple complex at Annables Cottages, near Friars Wash approximately 1km to the south-east of the Junction 9 site, the faunal assemblage from which was dominated by pig bones (Wessex Archaeology 2009, 13), as well as the temple at Wood Lane End, to the west of Junction 8 (Neal

1983; 1984). A temple/mausoleum complex also existed at Rothamstead, Harpenden (Lowther 1937).

By the late 3rd century rural settlement in the region shows evidence of variable fortunes, with a number of the villas in the Verulamium hinterland showing decline in this period, followed by a possible revival in the early 4th century and decay from the mid 4th century (Williamson 2010, 68). Nevertheless, there are suggestions of late 4th- or early 5th-century activity (though not necessarily of typical 'villa' character) at some of these sites, including Gadebridge (Neal 1974, 76-83), Park Street (O'Neil 1947, 29-30) and Mackerye End (R Niblett pers. comm.). Change was also extensive in the lower-status rural settlements from the late 3rd century, as shown by evidence from Fairfolds Farm, Sandford, which went into decline around this time, and sites at Crawley Lane, Wiggington and Stoney Lane, Bourne End, which declined in the early 4th century. Local industries were also in decline by this period with, for example, the iron deposits in the Bulbourne Valley perhaps having been exhausted by, or at least not exploited beyond, the later 3rd century (Branigan 1985, 161). The Verulamium region pottery industry may have ceased production a little later, in the first half of the 4th century (Lyne 2006, 123).

Site layout, function and organisation

The six sites with Roman occupation encountered along the M1 widening corridor were spatially discrete and will therefore be discussed separately in geographical order from south to north.

Late Iron Age-early Roman activity at Junction 8N consisted of a substantial SW-NE-orientated linear ditch (7676) fronting a row of evenly spaced square postholes indicating a fenceline or possible bank revetment, with vestigial possible structural features just to the south. To the north-west of this was an irregular north-south-aligned boundary (7187), defined by a segmented ditch. The relationship of these features is unclear. In fact the spatial logic of the plan strongly suggests that the segmented boundary should be assigned to the succeeding early Roman phase and formed part of a series of irregular enclosures. Even if this was not the case, the fact that the fence/palisade associated with ditch 7676 lay on its south side suggests that other associated activity also lay in this direction. The absence of any other contemporary elements that might have formed related parts of enclosure boundaries appears problematic, but the problem may be misconceived; instead 7676 was perhaps part of a system of linear boundaries dividing the landscape, rather than enclosing individual settlement units within it. Such boundaries, as is clearly the case at Junction 8N, could have been substantial, but need not have been continuous over substantial distances. The scale, however, is more modest than that of the linear earthworks associated with some of the late Iron Age 'site clusters' discussed by Bryant (2007).

A single beam-slot and a few associated postholes lying just south of ditch 7676 may have represented part of an associated building, but are otherwise difficult to interpret. The function of a large sub-rectangular pit lying north of ditch 7676 is also uncertain. within the putative enclosure was ambiguous. Unfortunately, the finds assemblages are also unhelpful in addressing the nature of the late Iron Age activity as they are sparse. Pottery from this phase consists entirely of grog-tempered ware and where rim sherds are present they come from multi-functional medium-mouthed jars, suggesting that any settlement was not of particularly high status. No animal bone, charred plant remains or charcoal were recovered from any of the contexts associated with this activity.

Activity of early-middle Roman date at Junction 8N comprised a series of sub-rectangular enclosures (7700, 7277, 66624, 6622, 6150 and 6104), field boundaries (6768 and 6713) probably utilising elements of late Iron Age boundary 7187 (if indeed that boundary was not entirely of this phase), a trackway (6364 and 6365) and a corn dryer (6514). It appears that some elements of this enclosure system were laid out earlier than others, although overall it was early-middle Roman in date. The earliest element was probably enclosure 7700, which was possibly contemporary with corn dryer 6514, lying outside it to the south. Enclosures 7277, 6624 and 6622 were probably next in the sequence, with enclosures 6150 and 6104 laid out last. The field boundaries and trackway ditches have no stratigraphic relationship with the enclosures, but their spatial relationship with enclosure 7700 is fairly clear. The lack of evidence for structures within the enclosures makes it tempting to interpret them as part of a field system, but as with the late Iron Age-early Roman period, described above, shallow postholes could have been truncated by later ploughing. The form of the smaller enclosures, in particular, may suggest that they functioned as paddocks. The gaps between the segments of ditch 7187 on the north-western boundary raise questions about control of movement through this boundary, but may suggest a relatively complex system of stock control in this part of the site, the gaps, mostly relatively small, being closed with hurdles or similar structures as required. Either way, these ditches probably formed an outer ring of enclosures at the periphery of a larger settlement with its nucleus to the east of the excavated area, beneath the original line of the M1. The quantity and state of preservation of pottery from the fills of enclosure ditch 7700 and the presence of rubbish pits within the enclosure, however, suggest that it at least was the focus of some kind of settlement, although this could have been subsidiary to a main focus located close by. Although the constrained area of excavation does not allow certainty on this point, the apparent absence of further boundaries extending away westwards, from the ring of possible paddocks, suggests that there was no particular

need for a well-defined network of fields immediately adjacent to the settlement/paddock complex. This presumably reflected characteristics of the agricultural regime practised. Combined with the evidence of the character of ditch 7187 this suggests a concern with pastoralism, notwithstanding the presence of the corn dryer to the south.

Junction 8S also produced evidence of probable agricultural activity, very likely relating to the same nucleus of settlement located beneath the M1 between the Junction 8N and Junction 8S sites. The latter contained part of a sub-rectangular enclosure (5500) and a linear ditch (5501) producing small and abraded assemblages of early-middle Roman pottery and small amounts of animal bone. This material could have been incorporated into the fills of the field boundary through the spreading of midden material.

Enclosure and trackway ditches from Area M probably represented part of an agricultural landscape. In the first phase of activity, dating to the middle-late Iron Age, two slender ditches, 3022 aligned NNE-SSW and 3008 orientated east-west, before returning to the SSW, probably demarcated an enclosure. A gap between the two ditches, later blocked by a short east-west-orientated linear feature (3024), may have contained a stock-handling gate. The second phase of activity, dating to the early Roman period, may have represented either two trackways and a sub-rectangular enclosure or, more likely, successive phases of enclosure boundary with an adjacent trackway to the west, contiguous with the north-western corner of the principal enclosure. Activity in this phase is also likely to have been related to agriculture, with the small amount of Roman pottery from the ditch fills suggesting that any settlement focus must have been some distance away.

Roman features at Area P consisted merely of four ditches, all aligned roughly NE-SW, and a scatter of pits. The nature of the activity is therefore difficult to ascertain, but was again presumably agricultural in character. Two of the ditches may have bounded a NE-SW-aligned trackway. It is probable that all of the features were of early-middle Roman date.

The excavation at Junction 9 revealed evidence for a more-intensively utilised agricultural landscape, although the very narrow excavation transect made meaningful interpretation difficult. The principal features were a series of long-lived field boundaries initially set out in the late Iron Age and maintained and developed into the later 3rd century. Late Iron Age-early Roman activity was concentrated at the north-western and south-eastern ends of the excavation and comprised a series of probable field boundary and trackway ditches. At the north-western end of the excavation, ditches 2008 and 2188 probably formed a NE-SW-orientated trackway, south-east of which lay an isolated cremation burial (2012) in a grog-tempered pedestal urn. Immediately to the south-east of these features, ditches 2757, 2739 and 2114 probably defined a series of paddocks or enclosures and at the south-eastern end of the site ditches 2745 and 2747 may have defined the north-western boundary of an enclosure lying to their south-east, with ditch 2749 forming an internal division of the putative enclosure.

In the early Roman period the field systems at the north-western end of the site were augmented with a series of linear and L-shaped ditches. Ditch 2738 probably formed part of a sub-rectangular enclosure lying largely beyond the limit of excavation to the east, while ditches 2490, 2740, 2126 and 2594 supplemented, or reinforced, the late Iron Age-early Roman enclosure system to the south-east of ditch 2738. In the central part of the excavation, L-shaped ditch 2741 may have defined part of a sub-rectangular enclosure similar to that enclosed by ditch 2738. At the south-eastern end of the site, late Iron Age-early Roman ditches 2745, 2746 and 2749 were replaced by ditches 2748, 2750 and 2751, defining parts of two sub-rectangular enclosures. To the north of ditch 2748 was a large kiln/oven, which possibly functioned as a limekiln or corn dryer, while south of the ditch was a large waterhole, indicating that the enclosures may have functioned in part as paddocks for stock. There is no evidence for further modification of the enclosures at the northern end of the site during the mid-Roman period, but these enclosures probably remained in use, as they were subsequently modified in the late Roman period. In the central part of the excavation, the probable enclosure represented by ditch 2741 was remodelled by ditch 2742. However, the most extensive middle Roman reorganisation took place at the south-eastern end of the excavation, where early Roman ditches 2750 and 2751 were cut by curvilinear ditch 2752, which may have formed a sub-circular enclosure with ditches 2753 and 2754 extending beyond the limit of the excavation to the south-west. To the north of these ditches curvilinear ditch 2650 cut early Roman ditch 2748. Nearby hollows (2706, 2608 and 2657) were also of this date. Immediately to the north-west of these features, linear ditches 2755 and 2278 may have defined a NE-SW-orientated trackway running beyond the limits of excavation to the north-east.

Late Roman activity at Junction 9 was confined to the northern end of the site where L-shaped ditch 2737 may have defined two sides of a sub-rectangular enclosure. Lying immediately to the south of this enclosure was a well (2004), adjacent to an earlier ditch (2490), which continued to fill in this period. The character of the late Iron Age and Roman activity at Junction 9, particularly the putative trackways, the well and the waterhole suggests that the landscape was being used for the keeping of stock, while the kiln/oven indicates complementary activities probably associated with arable production. That the agricultural regime was mixed is indicated by the evidence of both animal bones and the presence of charred plant remains

found in association with the possible corn dryer, and also elsewhere. The lack of evidence for buildings and the small quantities of material culture also point towards an agricultural as opposed to a settlement function for this area, although the frequency and variety of reworking of enclosures and linear boundaries suggests that a domestic focus lay close by. It should also be borne in mind that, as at Junction 8N, shallow post-holes and foundation trenches may well have been removed by later truncation.

Activity of this period at Junction 10 was confined to a fenceline comprising 13 postholes, which produced two sherds of late Iron Age-early Roman pottery. The context of this structure is most likely to have been agricultural, but the evidence for its date is extremely limited.

Agricultural economy and diet

The evidence of Roman enclosures and field systems at Junction 8 and Junction 9 attests to fairly intensive and long-lived use of the local landscape for agriculture, including both crop growing and animal husbandry, from at least the late Iron Age until the end of the 3rd century when it is possible that there was a widespread reorganisation of the landscape, which would fit well with the evidence from some other rural sites in the Verulamium hinterland (R Niblett pers. comm.). These include indications of changes in the organisation of the villa estate at Gorhambury at this time (Neal *et al.* 1990, 77), and it is possible that such changes had implications for the use of the landscape in the M1 area in the 4th century.

Faunal assemblages were recovered from the late Iron Age, early Roman and middle Roman phases at Junction 8S, Junction 8N and Junction 9, but unfortunately not from the other Roman sites (see Chapter 8). The assemblage from Junction 8N consisted of a mere 290 fragments, largely deriving from the early-middle Roman phase and largely consisting of teeth. This assemblage is dominated by cattle and horse, indicating that cattle and horse husbandry may have been one of the activities associated with the enclosures at Junction 8N, but the poor state of preservation of the material makes it clear that much, if not all, bone from medium-sized and smaller animals (of which sheep/goat would have been the most important) is likely to have been lost to adverse soil conditions, so it is impossible to judge the relative importance of the main domestic species at this site.

The faunal assemblage from Junction 9 was in better condition. It was dominated by cattle and sheep/goat, with sheep/goat remains being more common in earlier contexts. A wider range of body parts was present in this assemblage and evidence of butchery suggests that a settlement focus must have lain very close to the site. Some pig bone was also present. Again the evidence indicates that animal husbandry was one of the activities undertaken within the field systems. High proportions of cattle remains are often taken as a sign of high status, urban or military functions (King 1999, 180), although a general increase in the representation of cattle, as seen at Junction 9, can be characteristic of the later Roman period on sites of a variety of types in southern Britain. In the local context, this pattern may perhaps be explained in terms of some kind of connection between the Junction 9 field system and the villa at Gorhambury (Neal *et al.* 1990), where the faunal assemblage was also cattle dominated, with a further connection in terms of husbandry geared to the provision of resources for Verulamium, where cattle appear to dominate the faunal assemblages from the beginning of occupation onwards, although they are also of major importance in the late Iron Age (Niblett 2005a, 132-3). Whether the Junction 8N site formed part of a similar agricultural regime cannot be determined and evidence for the other sites is lacking altogether. Burnt residue from a Verulamium-region white ware vessel recovered from well 2004 at Junction 9 was analysed for lipids and produced evidence of degraded animal fat (see Chapter 7). Unfortunately, the specific type of fat could not be determined, but this result adds to the evidence for exploitation of animals at the site.

The charred plant assemblages from Junction 8N and Junction 9 indicate that spelt wheat was the dominant cereal product on both sites (see Chapter 8), with corn dryers from both sites demonstrating that crop-processing activities were being undertaken. The charred grain assemblages may be seen as fairly typical of the region, where other local assemblages are dominated by spelt or spelt and emmer (see Chapter 8). Taken together, the faunal and plant remains indicate a mixed-farming regime, with elements of crop processing and animal husbandry being undertaken at both Junction 8N and Junction 9. Fragments of quern stones from Junction 8 and Junction 9, with 57 fragments coming from Junction 8, supplement the evidence for crop processing on both sites. Such activity may, however, have involved little more than routine conversion of grain to flour and meal on a day-to-day basis. There is, for example, no evidence from the corn dryers for their use in the malting process.

A further aspect of the economy of these settlements is illustrated by the evidence for manufacture of querns of Hertfordshire Puddingstone at Junction 9 (see Chapter 7). The occurrence of flakes of more than one variant of this stone type, in a number of dispersed contexts, suggests at least intermittent, rather than one-off, production. The fact that fragments of the querns themselves were not found does not reveal much about the nature of this production, but the general rarity of direct evidence for quern production sites in Roman Britain, and the location of the site close to Watling Street, might suggest that quern production was at least a semi-specialised task and might have been a significant supplement to the agricultural economic base of the site.

Ritual and burial practices

There was little evidence for ritual activity in the form of 'structured' deposits of large groups of pottery, animal bone and human bone, or small finds in the ditch fills or pits of any of the late Iron Age or Roman field systems within the M1 widening corridor. However, pit 7124, which was situated within enclosure 7700 at Junction 8N, contained materials that clearly suggested structured deposition. This material included pottery, human skull fragments and a quern stone in the pit's basal fill, along with a charcoal-rich lens incorporating a cattle mandible and humerus, and 75 fragments of unidentified animal bone. Other evidence for ritual activity came from three late Iron Age-early Roman cremation burials, two from Junction 8N (6289 and 6293) and one (2012) from Junction 9. Burials 6289 and 2012 were contained within, and 6293 was accompanied by a grog-tempered ceramic vessel dating to the late Iron Age-early Roman period. Cremation burials 6289 and 6293 were found within enclosures 7277 and 6624 respectively, but could have predated them. It is possible that these burials were placed within a functioning field system. Burial 2012, in a late Iron Age pedestal urn, was contemporary with late Iron Age enclosures at Junction 9. The iron disc from a later Roman ditch at the same site (see Chapter 7), some 60m south of burial 2012, might possibly, in view of the associations of the majority of the known objects of this type, have been derived from a further disturbed burial of late Iron Age date.

Wider networks

The character of the narrow M1 widening scheme transect limits the extent to which the evidence contained within it can be used to support wider conclusions about the nature of exploitation of the landscape in this period. Nevertheless, the indication of increased numbers of sites of late Iron Age and Roman date, and of more intensive activity within most of them compared to the evidence from earlier periods, support, at least superficially, a more general model of intensification of landscape use at this time. A remarkable increase in the number of sites of late Iron Age date, compared to those of middle Iron Age date, has been noted in the Chilterns (cf Bryant 1995, 26). Despite the relative difficulties concerning the material culture of the earlier period (ibid.; Masefield 2008, 192) the broad validity of this pattern has been recognised more widely in south-east England by Hill (2007, 24), who sees parts of Hertfordshire as amongst those regions which 'seem to have had relatively little permanent settlement *c* 300-100 BC' and links the apparently rapid expansion of settlement patterns thereafter with large-scale social change at this time.

The M1 evidence is consistent with such a model. It also underlines the importance of what seems likely to have been a particularly significant component of the physical manifestation of intensification of landscape use, the definition of trackways with linear ditches. Such ditches are a key feature of the M1 sites at Junction 8S, Areas M and P, and Junction 9. There is no evidence from the present project for trackways defined in such a way (or indeed in any way) before this time. This is not to doubt the existence of defined routes through the middle Iron Age and earlier landscapes, but the means of such definition in a less-intensively exploited landscape (following Hill 2007) do not seem to have involved extensive provision of archaeologically detectable features. A characteristic related to the widespread introduction of ditched trackways is the use of ditched enclosures to define settlement locations. In the context of a national survey of Romano-British rural settlement enclosed sites are defined as representing 'a significant majority of the classifiable settlements' in Hertfordshire (Taylor 2007, 49). This characterisation is again of a 'broad-brush' nature, but is once more supported by the M1 evidence.

The M1 sites include no complete settlement enclosures, but suggest that these were potentially of varied form, apparently having an organic, agglomerative character at Junction 8S, while appearing more rectilinear at Area M and Junction 9, although curvilinear features did occur at the southern end of the latter site in the middle Roman period. The artefact assemblages, associated with these different sites and areas, are insufficiently large or distinctive to shed light on the possible significance of these morphological variations, whether in terms of specific functions or of social or economic status-related characteristics.

A further characteristic of the M1 sites is the evidence for field systems. In the case of Junction 8N, the small sub-rectangular enclosures are perhaps best seen as paddock-like additions to a settlement nucleus (see above), rather than forming part of a wider system of fields. The position at Areas M and P and at Junction 9 is less clear, though in all cases it is possible that some of the linear ditches at these sites formed parts of field boundaries rather than (or as well as) defining settlement enclosures and trackways. At The Aubreys, however, it seems more likely that linear ditches outside the hillfort to the east and tentatively dated to the Roman period formed part of a system of rectilinear fields, given that there was no indication of contemporary settlement related activity in the near vicinity. Again the definition of fields using ditched boundaries may be seen as more characteristic of the late Iron Age and early Roman periods than earlier, as has also been suggested as a result of survey work undertaken north of Berkhamsted (Morris and Wainwright 1995, 70-1).

In terms of general aspects of early chronology and demarcation of settlement and agricultural landscape, the M1 sites therefore supplement the information on known patterns of development, but are of value in providing this evidence in the context of broadly lower-status settlement types.

Good structural evidence remains elusive, a problem which can be characteristic of such sites but is exacerbated by the nature of the excavated sample, as structures could have been located close by rather than within the transect. Careful examination of the ceramic building material shows that much of it was brick and it is likely that all this material (concentrated at Junction 8N and Junction 9) had been recycled for use in features such as hearths and ovens. It therefore reveals little about the buildings of the Roman period on these sites, but instead raises the question of how far people were prepared to carry such material for reuse. It is possible that in the case of Junction 8 the brick and tile derived from the enigmatic building at Breakspeares (cf Hunn 1995a, 83). If this was the case, it may be appropriate to characterise this latter site as a small villa, although it remains unclear if the Roman features at Junction 8N would have formed an integral part of this site or lay adjacent to it. Potential sources of brick and tile for Junction 9 are not so easily identified, but a number of substantial buildings (including the temple at Friar's Wash less than 1km away) lay within a fairly short distance of this site, and its proximity to the line of Watling Street would have made transport of building material relatively straightforward. The question of whether any of the fragments of window and vessel glass from Junction 9 can also be explained as obtained through recycling is less certain, but may perhaps be worth consideration. The absence of indicators of moderate status amongst the metal and pottery assemblages from this, as well as the other M1 sites, suggests that the glass may be anomalous, but once again the constraints of the excavated areas mean that any such assessment can only be tentative.

MEDIEVAL ACTIVITY *by Dan Stansbie*

The landscape

Evidence for medieval activity discovered during the course of the project was concentrated around Junction 8, to the west of medieval St Albans and within the hinterland of the town, which lay only 5km to the east. Unfortunately, the inevitable restrictions of linear scheme excavation give tantalising glimpses of the medieval settlement pattern, rather than a broader understanding of the landscape that a larger concentrated development scheme might yield. Nevertheless, evidence from Junction 8N, the Junction 8 Compound and the Junction 8 watching brief offers some insight into the dispersed and possibly related medieval settlement pattern in this area. Junction 8N produced the most substantial evidence for settlement, including a post-built structure, pits, and enclosure and a limekiln. Immediately to the north of this settlement, at the Junction 8 Compound, was a north-south-aligned ditch and a group of pits probably also representing medieval settlement and dating to the 11th-13th centuries. To the north of this activity the Junction 8 targeted watching brief revealed a short stretch of a NW-SE-orientated hollow-way of possible medieval date, and a group of pits, possibly representing a small building and possibly also of medieval date, just to the south. Together this evidence gives the impression of small-scale and dispersed settlement and agricultural activity, perhaps suggesting the existence of several peasant hamlets in the area.

Junction 8N: settlement layout, function and organisation

The settlement at Junction 8N provides the most extensive evidence for medieval activity, including at least one croft, a limekiln and attendant rubbish pits and drainage ditches. The occupation was divided into two phases, the later dating to the late 12th-13th centuries and the earlier, which produced no secure dating evidence, predating this, but probably also belonging to the late 12th-13th centuries. The first phase of activity, situated towards the northern end of the Junction 8N excavation area, comprised two east-west-aligned ditches (6095 and 6449) spaced approximately 26m apart, with a small kiln/oven (6585) lying between them, close to the eastern end of ditch 6449. Both ditches ran beyond the limit of excavation to the west and east. The interpretation of these features is difficult, given their fairly ephemeral nature, but the lack of evidence for domestic occupation from this phase, including a lack of structures, rubbish pits and finds or environmental evidence, suggests activity of broadly agricultural character. The parallel alignment of the ditches and the distance between them of 26m, or approximately 28 yards, may be taken to suggest that they bounded a strip field, albeit one that had been turned over to small-scale occupation by the late 12th century. The presence of the kiln within this strip is problematic, but it is situated close to the northern boundary and may also have been associated with agricultural activity, perhaps serving as a crop drying oven, an interpretation supported by the recovery of cereal grains and chaff from the upper fill (6591) of the oven (see Chapter 8). By the late 12th century the field strip, if that is what it was, had been replaced by a small settlement, though the evidence does not allow its character, whether as individual farmstead or hamlet, to be determined. This perhaps represented a 'daughter settlement' built to accommodate a son unable to find his own holding, or parents who had given up their holding (Stamper 1999, 257).

The second phase of medieval occupation included a post-built structure (6961) orientated SW-NE, presumably representing a peasant dwelling or croft, or possibly two such structures erected end to end. The building was accompanied by two phases of drainage ditches to its south-east. An initial phase of curvilinear drainage ditches

(6300, 6403, 7006 and 7704) on a roughly SW-NE alignment, ran parallel to the structure. Having silted up or been backfilled, ditches 7006 and 6403 were replaced with a NW-SE-orientated linear ditch (6402). North-east of structure 6961 and at right-angles to it a slight linear ditch (6515) may have represented a palisade slot, while similarly ephemeral ditches 6538 and 6524 probably served a similar function. Several large pits (6030, 6054, 6188, 6497, 6451, 6276 and 6406) surrounding structure 6961 had regular profiles and may have been dug to extract building materials, but also served as rubbish pits, all of them producing assemblages of pottery and animal bone. Pit 6406, a large oval-shaped feature situated immediately to the south-west of structure 6961, contained multiple layers of deliberate backfill material which incorporated a substantial assemblage of late 12th-13th-century pottery. Given the size and shape of this feature, along with its location, it may be interpreted as a latrine pit, but there is no evidence for any structure surrounding the pit and there is no environmental evidence to support this interpretation.

The medieval occupation continued beyond the limit of excavation to the south-west, and possibly incorporated more buildings, and agricultural working areas, as shown by evaluation trench 1126, which revealed several NE-SW-aligned gullies and a layer containing 13th-century pottery. Within the excavated area the settlement was enclosed to the north-east and north-west by an L-shaped ditch (6109), presumably representing a toft boundary, and to the south-east by the presumably still visible line of Roman trackway boundary 6364. A limekiln (6825) was situated in the south-east corner of the enclosure, close to ditches 6109 and 6364. Reuse of Roman enclosure boundaries during the medieval period can be paralleled at nearby Gorhambury (Neal *et al*. 1990, 83) and it has been suggested that the extensive co-axial landscape in the area of Shenley Ridge, North Mimms and Aldenham incorporates the remains of a planned Roman system of land allotment in later fields (Williamson 2000, 146-7).

The evidence suggests that this activity represents a small peasant holding, possibly comprising a single toft/croft, of a type typical of the dispersed landscape of the Chiltern dip slope (Hunn 1995b, 50), but under represented in the archaeological record of Hertfordshire. Building 6961 almost certainly represented the dwelling place of a single peasant family and probably comprised a simple post- and clay-built structure of two bays. The surrounding drainage gullies indicate that the settlement may have had problems with surface water, possibly over an extended time period given the evidence for remodelling of the drainage system. However, such an arrangement is paralleled at Gorhambury, where large linear ditches were laid out at right-angles close to a small rectangular post-built structure of late 11th-early 14th-century date (Neal *et al*. 1990, 84) and at Caldecote in North Hertfordshire, near Baldock, where 11th-early 12th-century post-built structures were provided with large curvilinear drainage ditches (Beresford 2009, 61). The large but relatively scarce rubbish/clay extraction pits are harder to parallel on rural settlements from Hertfordshire and their contents probably do not represent all the rubbish produced by the household, much of which must have been placed on middens and spread onto the fields. Given the late 12th-13th-century date range of the pottery from the fills of the pits they need represent little more than a single generation's occupation.

Limekilns, such as kiln 6825, are traditionally interpreted as being used for the production of lime mortar for construction, with a by-product being lime for use in the lime washing of wattle and daub buildings. However, given the lack of evidence for stone-built structures on the site, and notwithstanding the fact that such structures may have lain beyond the limit of excavation, it seems possible that lime production at the settlement was intended for agricultural use. A limekiln was also discovered at Gorhambury (Neal *et al*. 1990, 85-6) and a kiln was excavated at Caldecot (Beresford 2009, 63), although in this case it was interpreted as a corn drying or malting oven.

Junction 8 Compound and targeted watching brief

Activity at the Junction 8 Compound comprised a single length of ditch and a scatter of pits, which produced a small amount of medieval pottery, while excavations at the targeted watching brief produced a further scatter of pits and a hollow-way/trackway of possible medieval date. The ephemeral nature of these features and the small scale of the excavations make interpretation difficult. However, the general impression gained is one of low-key settlement activity, probably also relating to a farmstead/farmsteads and confirming the picture of dispersed medieval settlement in the area.

Structural components

As stated above structure 6961 probably represents a post-built peasant dwelling, possibly comprising two structures built end to end, but more likely a single structure of two bays, with a cross-entry approximately halfway down its length. The construction was of timber posts, probably set in clay walls, which would account for the slight irregularity of the post-lines (Beresford 2009, 64) and also for the fact that there is little evidence for any repair, or the replacement of the posts. Unfortunately, there is no evidence for how the structure from Junction 8N would have been roofed, although it might be expected to have had a thatched roof of straw or reeds (Dyer 1986, 26). The structure is paralleled at Gorhambury, where a post-built structure (Building 56), slightly smaller than the example from Junction

8N, was dated to the early 12th-14th centuries (Neal *et al.* 1990, 85). Four similar houses dating to the 11th-early 12th centuries were excavated at Caldecote (Beresford 2009, 58-63), although again the structures were all considerably smaller than the example at Junction 8N. Larger houses of similar construction dating to the 12th-mid 14th centuries were also excavated at Caldecote (ibid., 85-6).

Agricultural economy, diet and status

Unfortunately, all the charred plant remains of medieval date from Junction 8N come from kiln 6585 and pit 6788, which was probably part of the kiln and therefore from the first phase of medieval activity, before the establishment of the settlement. They cannot therefore be compared directly with the evidence of the small animal bone assemblage, which comes entirely from contexts associated with the second phase of activity. However, the assemblage does give some insight into the agricultural use of the area before the establishment of the settlement and may be relevant to understanding of the second phase settlement if it is assumed that there was no radical difference in agricultural practice between the two phases. The cereal assemblages from oven 6585 and pit 6788 are dominated by spelt wheat, with some rye, and are a mixture of cereal grain, cereal chaff and weeds/wild plants (see Chapter 8) indicating a fairly standard medieval arable economy. Some vetch/garden pea is also present. The assemblage can be compared with cereal remains from Caldecote which are sparse, partly due to the fact that widespread sampling was not standard practice at the time of that excavation (Martin 2009). The Caldecote assemblage was also dominated by wheat, although bread/club wheat was dominant over emmer/spelt (ibid., 227) and rye, barley and oats are also present. The evidence of the charred plant remains from Junction 8N indicates that a fairly standard range of crops was cultivated and processed on the site before the second phase settlement was established. Fragments of rotary quern recovered from medieval contexts are likely to represent residual Roman material, and it is possible that crop-grinding activities took place off site, or else that evidence of medieval grinding implements did not survive. The lack of charred plant remains associated with the settlement itself is problematic, but it may be assumed that the inhabitants had access to a similar range of crops to those from Caldecote, including wheat, barley, oats, peas and beans (Beresford 2009, 231). Charcoal from oak, ash and beech, among other species (see Chapter 8), recovered from kiln/oven 6585 and pit 6406 shows that a wide range of timber was available for exploitation.

The medieval animal bone assemblage only numbers 254 fragments, suggesting that much of the material derived from secondary deposition, an interpretation backed up by the presence of dog gnawing marks on some of the bones. Cattle, pig, sheep/goat, horse and domestic fowl are all present, with pig being the most common species by NISP and sheep/goat being as common as cattle. This presents an interesting contrast to the assemblage from Gorhambury, where this pattern is reversed (see Chapter 8). The assemblage suggests a standard mixed-farming economy, with the dominance of sheep/goat and pig perhaps being attributable to the location of the settlement in the upland environment of the Chiltern dip slope, an interpretation backed up by the comparable relative lack of cattle at Gorhambury. A mandible of a cat with a cut mark, which indicates that the animal had been skinned, suggests that the inhabitants of the farmstead were exploiting animal resources for clothing as well as food products. The probable deposition of the majority of animal remains on middens may explain the relatively small size of the assemblage, although poor preservation as a consequence of adverse soil conditions, already noted in relation to assemblages of Roman date, was presumably also a significant factor.

Further light is thrown on the economy of the medieval settlement by the composition of the pottery assemblage, which largely comprises cooking pots and storage jars in South Hertfordshire greywares, but shows a notable lack of wide bowls, a form usually associated on medieval rural settlements with dairying (see Chapter 7). This lack of wide bowls tallies with the paucity of cattle bone from the animal bone assemblage to confirm the picture of a more sheep/goat- and pig-based animal economy, perhaps more suited to the upland landscape of the area. Pigs would have been particularly suited to an environment with a relatively high proportion of woodland.

As has already been suggested, the structural evidence indicates a peasant toft/croft, probably accommodating a single family operating a subsistence farming regime. The pottery evidence broadly confirms this picture, with the pottery assemblage being dominated by cooking/storage jars in South Hertfordshire grey wares, with only a few regional imports including some green-glazed jugs. Four body sherds from a probable imported vessel, perhaps of Middle Eastern origin (see Chapter 7) from the fills of pits 6406 and 6188 form an exception to this pattern, but the small amount of this material (representing a single vessel) means that its presence, despite being intrinsically interesting, does not really alter the overall picture. A single medieval whetstone from ditch 6645 and made from Norwegian rag is likely to have been used for sharpening fine implements, but is not necessarily out of place in a settlement of this type (see Chapter 7). Few metal objects were recovered from medieval contexts and those that were, including a decorative stud and a pair of tweezers, are common enough finds on comparable medieval settlements (Cool *et al.* 2009, 179-209). Overall the evidence of the finds confirms the picture of a relatively low-status peasant household suggested by the structural evidence.

The settlement in the wider landscape

The medieval settlement pattern on the Chiltern dip slope in the 11th century, particularly within the hinterland of St Albans, was dispersed, with relatively few settlements (Redbourn and Sandridge) acquiring village-like characteristics by the 14th century (Hunn 1995, 50). Wheathampstead, probably an early minster within a Saxon estate centre (eg Williamson 2010, 157) arguably also had such characteristics (R Niblett pers. comm.), while at Hemel Hempstead there was a market by about 1300 (Williamson 2010, 243). The remaining settlement pattern was characterised by small dispersed hamlets, in character more like the medieval settlement from Gorhambury (Neal *et. al.* 1990) and unlike the nucleated village at Caldecote, which was located on the north Hertfordshire chalk lands (Beresford 2009, 21). Indeed Lewis *et al.* (2001, 10) state that, 'the absence of large medieval villages, deserted, shrunken or inhabited in such districts as the Chilterns must mean that nucleated settlement never existed there'. This pattern is seen by Hunn (1995b, 50) as being heavily influenced by the presence of St Albans, which provided a relatively large central focus discouraging the development of larger villages. However, it may also be seen as a response to the upland landscape, which was perhaps less suitable for large-scale cultivation than other lower-lying areas of the region. The settlement at Junction 8N may therefore be seen as typical of the area.

The wider landscape of the St Albans area has been seen as exhibiting many of the characteristics of a woodland landscape (ibid., 50) and the limited charcoal evidence from the Junction 8N settlement does not contradict this pattern, with beech, oak, ash, hazel, hawthorn-type, gorse/broom, willow/poplar and blackthorn-type all being recovered. It should be remembered, however, that the bulk of this material was recovered from kiln 6585, which belonged to the initial agricultural phase of medieval activity, and from one other context, pit 6404. Field systems in the St Albans area were characterised by open common arable fields, interspersed with smaller units, sometimes enclosed with hedges (ibid,, 53). Elements of enclosure were therefore present in the landscape from an early stage. The evidence gained from the excavations at Junction 8N fits neatly into this picture, adding to our understanding of a landscape populated with small dispersed peasant hamlets. While the evidence from Caldecote (Beresford 2009) provides parallels in terms of building techniques and material culture, the settlement at Gorhambury (Neal *et al.* 1990) provides a closer overall parallel for the settlement at Junction 8N. Although the evidence gained from the M1 excavations is unsurprising and fits into already established understandings of settlement in the area, it remains important as a relatively rare example in the region.