Chapter 3

Early prehistory

by Paul Garwood

Introduction

The huge scale and intensive nature of the archaeological fieldwork undertaken along the High Speed 1 (HS1) route provides us with an unparalleled opportunity to explore the past cultural worlds that existed in south-east England in earlier prehistory, from the end of the last Ice Age to the development of complex Bronze Age agricultural landscapes. The significance of some of the sites and finds extends further, to major debates concerning the nature of earlier prehistoric social interaction, innovation and transformation in southern Britain and north-western Europe more widely. Indeed, it is quickly apparent from a survey of the HS1 evidence that much of it is explicable only by situating it within larger-scale regional, national and international frameworks of knowledge and understanding. The presence of an Early Mesolithic hunting party at Saltwood, for example, relates to patterns of inhabitation that traversed lands lying beneath what is now the southern North Sea and English Channel. The rich Late Mesolithic evidence from sites along the Greensand ridge, notably at Sandway Road, is best understood with reference to the spatial organisation of hunter-gatherer territories which spanned large areas of south-east England, including the ancient coastal plains submerged by Early Holocene sea-level rise. The Early Neolithic timber halls at White Horse Stone/Pilgrim’s Way are especially important because of their geographical position and early date in relation to cultural interactions with communities in continental Europe that led to the adoption/creation of new farming technologies, social structures and ways of thinking that would delineate the fundamental conditions of social life in Britain for the next three thousand years. Even the single burial at Whitehill Road, of a woman with an amber necklace, can only be understood in the context of long-distance maritime communication and exchanges in the mid-2nd millennium BC, in this case with people who lived in the Netherlands.

These examples of movement and cultural transmission provide all manner of possible metaphors relating to journeys through landscapes past and present that seem especially apposite for the particular character of the HS1 route and its purpose. At the same time, however, the path that the HS1 Section 1 corridor takes—transecting parts of the chalk downlands, Greensand ridges, wealden clay vales, and the brickearth and gravel plains of north Kent—allows for in-depth investigation of human occupation and ways of life in contrasting topographical, pedological and ecological zones. Moreover, the early prehistoric period, spanning some twelve thousand years (c 13500–1500 BC), encompasses the most profound and rapid series of environmental and cultural transformations in Britain before the industrial revolution. The route thus provides linear samples of many different ancient cultural landscapes, in both space and time, all of which in their own terms reveal complex patterns of human behaviour, representation and meaning organised at several social and spatial scales. There is no simple interpretative model that can encompass this diversity, not least because of the very different kinds of societies that the inhabitants of these early prehistoric landscapes belonged to, ranging from relatively small-scale hunter-gatherer communities operating over vast geographical ranges, through tribal or clan-organised agricultural groups, probably occupying local core agricultural territories, to hierarchical chiefly polities with complex and often expansive social and political organisations.

In this broad context, the research significance of the HS1 Section evidence stems not only from its breadth and diversity, distributed along a corridor nearly 70km in length and up to 200m wide, but also its richness at a local scale, due largely to the intensive nature of the fieldwork methods applied. This contrasts with the generally lower levels of earlier prehistoric site identification and data recovery along comparable sections of other high speed rail routes in northern and western Europe such as TGV Nord (Blanchet 2000; Remy and Soumoy (eds) 1996; Saint-Blanquat 1992), although of course there are exceptions like the Hardinxveld Mesolithic settlement investigated on the Betuweweg route in the Rhine-Maas delta (Louwe Kooijmans 2001). All of the 30 major area excavations along the HS1 Section 1 route produced earlier prehistoric artefacts, and in ten cases (Figs 3.1 and 3.2) these revealed significant stratified assemblages of one or more periods in pits, ditches and other sub-surface features, and/or evidence for built structures such as houses and monuments. The significance of this contribution to our knowledge of the prehistory of southern Britain cannot be underestimated: the Sandway Road Late Mesolithic flintwork assemblage, for example, is one of the largest recovered in the region; the Early Neolithic hall structures at White Horse Stone/Pilgrim’s Way are exceptionally important both nationally and internationally; the Late Neolithic settle-
Evidence at the same site is rare in southern Britain and north-west Europe more widely; and the number of earlier Bronze Age funerary monuments excavated comprises a sixth of those recorded to modern standards in the whole of south-east England. Even the very rare instances of Chalcolithic and Early Bronze Age burials are important in research terms because of their unusual character and/or the evidence they provide for geographically extensive funerary repertoires and long-distance cultural contacts.

There is no question that the HS1 evidence is of considerable relevance to a wide range of current research themes in earlier prehistoric studies in Britain and the nearer parts of continental Europe, including reassessments of the Mesolithic–Neolithic transition, the sedentism/residential mobility question and the nature of Neolithic settlement, the significance of mortuary practices, and the scale, character and extent of population movements and cultural interactions. The relative value of particular kinds of evidence from specific HS1 sites with respect to these research themes is, of course, variable. Yet whether this evidence derives from a single depositional event at one site or from repeated patterns of social activity at a multiplicity of sites along the route, the very scale of the project and the opportunity this provides for comparative analysis—including basic contrasts in terms of presence and absence of evidence—provides entirely new perspectives on the earlier prehistory of south-east England.

Late Pleistocene and early Holocene cultural worlds

The hunter-gatherer communities that populated Britain after the last Ice Age led complex lives (see Conneller and Warren (eds) 2006), guided in part by the seasonal availability of resources, environmental conditions and the need for residential mobility in order to be in the ‘right places at the right times’ to secure their livelihoods. Ethnographic parallels suggest that the spatial scale of group movements over a year could be considerable, with territorial or foraging ranges possibly extending for anything up to 300km, depending on local resource availability, movements of game, preferred occupation areas for base camps and larger social gatherings, as well as topographical and other geographical parameters that conditioned the spatial articulation of routeways and patterns of inhabitation. It is important to recognise, however, that whilst sharing certain characteristics in common, especially the structuring of social relations around the consumption rather than the production of resources, and relatively consistent scales of social organisation, hunter-gatherer societies recorded ethnographically, historically and archaeologically are extraordinarily diverse (Gamble 1986, 28–62; Jordan 2007; Rowley-Conwy 2001; Finlayson and Warren 2010). This can be accounted for partly in terms of different environmental possibilities and constraints, and ‘adaptive’ technologies and material cultures geared to...
specific ecological systems. This is insufficient, however, to explain the specific subsistence and technological choices made by hunter-gatherers, or the particular social and spatial organisations of their lives, which were defined more by their beliefs, values, and perceptions of their social relationships and the physical worlds in which they lived than by environmental factors alone (see Barnard 2007; Jordan 2003; Milner 2007; Warren 2007).

There appear to be some consistent patterns in the way hunter-gatherer groups were structured, interacted and perceived themselves in social, territorial and ethnocultural terms. In most cases, local exogamous groups or ‘bands’ constituted the minimal productive social unit, numbering 20–70 persons. Several of these together would form a culturally distinctive, usually endogamous regional group, also described as a ‘maximal band’, ‘tribe’ or marriage universe (connubium), numbering c 200–1000 people and occasionally more (Gamble 1986, 50–3). In other respects, however, there is great variation in the spatial and temporal articulation of bands and larger groups, and in their residential organisations, subsistence practices and technologies. Ideal-type contrasts are often made, for example, between ‘foraging’ and ‘collecting’ systems (Rowley-Conwy 2001, 40–1): the former involving frequent movements by bands between short-lived camps central to foraging/hunting zones, often with an emphasis on specialised exploitation of specific resources; the latter involving less mobility and longer-term occupation of base camps with more diverse resource procurement. A rather different, but equally significant contrast is made between ‘immediate-return’ and ‘delayed-return’ economic systems (Woodburn 1980; 1982); the former corresponding to conventional views of nomadic hunter-gatherers consuming their resources as soon as they acquire them and then moving on; the latter relating to more long-term strategies involving the building of fixed assets such as durable houses, fish traps and storage facilities, the social and economic ‘returns’ on such investments being spread over months or years. Such delayed-return systems, which favour a higher degree of sedentism, concepts of personal and group ownership and greater territorial fixity, were probably widespread in

Figure 3.2  Chronology of the High Speed 1 early prehistoric sites
prehistory, especially in relatively resource-rich and predictable ecological settings such as Mid-Holocene south-east England during the later Mesolithic.

These models of hunter-gatherer societies can be applied to both the British Late Upper Palaeolithic and Mesolithic, although interpretation is complicated by the nature of the evidence and the need to take account of the changing environmental contexts of social action. The greatest challenge is material, as the archaeological record from south-east England consists almost entirely of lithic artefacts, with very little animal bone and no human remains at all (Barton 2009; Milner and Mithen 2009). Most sites in the region are in open-air contexts (with the exception of a few rock shelters in the Weald), few have stratified deposits, built structures are unknown, and the majority are only vaguely dated because of the lack of suitable radiocarbon sample materials (for recent reviews of the evidence, see: Champion 2007c; Ellaby 1987; M Gardiner 1990, 40–2; Holgate 2003; Jacobi 1982). It is also likely that a large part of the post-glacial/Early Holocene occupied landscape has been submerged by sea-level rise (Shennan and Horton 2002, Shennan et al. 2006; Gaffney et al. 2009), leading to uncertainties about wider settlement patterns (see Figs 3.3, 3.9, 3.10). It is very difficult, therefore, to establish the scale, character and temporality of individual sites, and even more difficult to relate these to extensive patterns of social and economic organisation. Moreover, although the ecological changes that took place from the end of the last glaciation to the Mid-Holocene profoundly affected the social structures, practices and cultural rationales of hunter-gatherer communities (Barton 2009; Milner and Mithen 2009, 53–6; cf. Gaffney et al. 2009), their impact at a local level is often obscure because of chronological imprecision and the limited nature of both environmental and cultural evidence. From this perspective, recovery of Late Pleistocene/Early Holocene environmental data is often as important as evidence for human activity for understanding the Upper Palaeolithic and Mesolithic social practices, and how these were structured across the landscape.

**Late glacial and early post-glacial hunters**

Recolonisation of south-east England by human communities after the end of the Last Glaciation occurred initially as warmer conditions developed around 13,000–12,800 BC (Barton 2005, 115–38; 2009, 25–37; cf. Gamble 1999, 268–302, tbls. 6.5, 6.9). The Late Magdalenian (Creswellian) and succeeding Final Upper Palaeolithic societies that periodically inhabited southern Britain during the 13th to 10th millennia BC did not, however, establish a lasting or sustained presence. Indeed, human communities probably moved entirely with the return of extreme cold conditions during the Loch Lomond (‘Younger Dryas’) stadial, c 10,700–9600 BC (Barton 2009, 45–9). In any case, the very low-level presence of later Upper Palaeolithic groups, probably mainly hunting parties, is likely to have been seasonal and episodic (though certainly strategic rather than just environmentally driven; Tolan-Smith 2003a). A relatively short phase of Final Upper Palaeolithic recolonisation towards the end of this last cold stage, marked by the presence of ‘long blade’ lithic industries dating to c 9600–8000 BC (Barton 2009, 49), was soon succeeded by the appearance of characteristic Early Mesolithic ‘broad blade’ assemblages, associated with new subsistence patterns that accompanied extremely rapid climatic warming and ecological changes at the beginning of the Holocene.

Late Glacial and early post-Glacial finds are very scarce in Kent (Fig. 3.3), occurring mainly in river valley locations such as Oare near Faversham, Springhead in the Ebbsfleet valley, and Riverdale, near Canterbury (P Harding 2006b, 14–15). Final Upper Palaeolithic ‘long blade’ assemblages have also been found in HS1 Section 2 excavations at Springhead, at Lullingstone in the Derwent Valley (L. Dyson, pers. comm) and at Underdown Lane, Herne Bay (Riddler and Trelverthen 2006, 7). There was almost no evidence, however, for similar activity along Section 1 of the HS1 route. It is possible that fragments of charcoal in sediments dating to the late 12th/early 11th millennia BC at White Horse Stone derived from human activity (Giorgi and Stafford 2006, 13), but the only artefact find was a later Upper Palaeolithic burin redeposited in a Bronze Age ring ditch (W33) at Saltwood Tunnel (P Harding 2006b, 14–15). The human groups active in the region at this time probably belonged to communities that lived in eastern England (Campbell 1977, 172, map 46) and on the open grassland plains, lakeshores and littoral zones of the now-submerged North Sea Basin or ‘Doggerland’ (Gaffney et al. 2009, 115–16; 150–51). It is likely that hunting parties made only rare forays into the higher and more rugged inland parts of south-east England, traveling southwards from Doggerland or northwards across the Channel plains and river systems. This area was probably some distance from the main areas of inhabitation and large mammal migration routes, although the scale, organisation and geographical extents of Upper Palaeolithic territories and hunting ranges remain uncertain (Gamble 1999, 351–87).

Several HS1 Section 1 sites have contributed to our knowledge of local Late Glacial environmental conditions (Giorgi and Stafford 2006, 7–14). At White Horse Stone, cold climate molluscan assemblages from the basal valley sediments are similar to those recorded in Trench HV at Holywell Coombe near Folkstone, dated to 11,800–11,150 cal BC (OxA-2345; Switsur and Housley 1998). The high silt content of these sediments probably derived from loess deposits characteristic of Late Glacial tundra environments (Giorgi and Stafford 2006, 11). Thin-section analysis of sediments at White Horse Stone indicated that these were not produced by mass-movement solifluction processes, but developed incrementally through seasonal deposition of chalk meltwater muds with intervening periods of stabilisation and plant growth (Stafford 2006a, 13). Similar erosion and redeposition of Late Glacial sediments was also
evident in the Nashenden valley (Giorgi and Stafford 2006, 9), at Tollgate (Bull 2006b, 8–9) and at other sites in Kent such as Upper Halling and Holborough (Preece 1992; Giorgi and Stafford 2006, 10–12). In some places, these valley-bottom sediments were covered by ‘Allerød soils’ (ibid.; Kerney 1963; Preece 1994), including deposits at White Horse Stone and in the Nashenden Valley. Thin-section analysis of the White Horse Stone Allerød horizon, however, showed that it does not represent an in situ soil, but consists instead of reworked humic material with lenses of fine silt sediments. Two pieces of charred woody material from these deposits produced a radiocarbon date of 11,500–10,900 cal BC (NZA-22046) (Stafford 2006a, 13–14), which is very similar to the mean pooled age of 11,990–11,020 cal BC for the Allerød soil at Holywell Coombe (Switsur and Housley 1998). These observations are important because they reinforce the general impression of mainly cold open grasslands stretching across southern England during the Windermere interstadial, traversed easily but probably only occasionally by hunting groups.

Mesolithic sites and landscapes

The Mesolithic period encompasses some profound social and cultural changes, including the sustained resettlement of Britain from c 8000 BC, the increasing presence of complex hunter-gatherer societies, the intensification of subsistence and residence systems and eventually the adoption of farming practices in the late 5th/early 4th millennia BC. The Early Mesolithic, dating to c 8000–6500 BC (Milner and Mithen 2009, 57–8), is typified by ‘broad blade assemblages’ with large microliths (such as obliquely-blunted points), large game hunting in open grassland landscapes and seasonal residence patterns that required a high degree of mobility, often over long distances. The Late Mesolithic, c 6500–4000 BC, is typified by ‘narrow blade’ assemblages with an emphasis on small geometric microliths suitable for making a diverse range of tools, broad-spectrum subsistence regimes that included the hunting of woodland game and intensive exploitation of plants and marine resources, and ‘tethered mobility’ residence...
patterns within relatively fixed territories. In addition, in south-east England, a regional Early Mesolithic variant or intermediate ‘Horsham’ assemblage type has been identified, with obliquely-backed microliths and basally retouched points, dating to c 7000–6000 BC (Jacobi 1982; Reynier 1998). A small number of HS1 Section 1 finds can be allocated to this Horsham ‘phase’ but the vast majority belong to Late Mesolithic narrow blade assemblages.

It is important to bear in mind the impact of environmental changes caused by climatic warming. Sea-level rises led to the separation of Britain from the continent around 6500 BC, the final inundation of Doggerland by c 6000 BC and progressive submergence of remnant coastal plains around the present coast thereafter (Champion 2007c, fig. 4.1; Gaffney et al. 2009, 138–47). This was paralleled by an afforestation process that transformed open grasslands into mixed broadleaf woodlands. However, direct evidence for these processes at a local level is limited and often ambiguous. Early/Mid-Holocene soils are rarely preserved in south-east England, usually occurring only in isolated subsoil hollows or archaeological features, while most sedimentary sequences are poorly dated. There are also major gaps in many of these sequences between the Late Glacial and later prehistory: basal deposits are frequently truncated, while colluvial sequences often date only from the Bronze Age or later (M Allen 2005; Bell 1992). Pollen evidence is also limited in the region, although it tends to confirm increasingly dense forest development during pre-boreal and boreal climatic stages (c 9000–5500 BC), initially with colonisation by birch and pine, followed by hazel and then oak and elm. There is considerable debate, however, about the character of these forests. A continuous canopy is often assumed (Rackham 2003) but there is now widespread evidence to suggest a more varied mosaic of dense and open woodlands, scrub vegetation and grasslands (cf. Vera 2000). Very little Mesolithic-period environmental data was recovered from HS1 sites (Giorgi and Stafford 2006, 14–16): charred hazelnut shells of Early Mesolithic date at Sandway Road may relate to the use of hazelnuts as a food resource (Moffet et al. 1989), while residual fragments of Early Mesolithic pine charcoal were found in postholes of the White Horse Stone Early Neolithic hall structure, and alder/hazel charcoal of Late Mesolithic date in the fills of Beechbrook Wood ring ditch 1021.

Evidence for Mesolithic activity on the chalkland sections of the HS1 route was especially scarce. This may be due to the low recovery of flint artefacts during field walking in general (P Harding 2006b) but may also genuinely reflect a lack of Mesolithic occupation. The small quantities of Mesolithic or Early Neolithic material found near Ebbsfleet and at Cobham Golf Course (including a small number of blades) came from areas where Mesolithic material has been recorded previously. The recovery of surface finds on the Greensand ridge part of the HS1 route was also surprisingly limited given the scale of previous finds such as Lord Monckton’s 19th century collection of 11,000 Mesolithic flint artefacts from fields just to the south of Sandway Road (ibid., 17–18). No HS1 sites produced surface assemblages even remotely comparable in size to this: the two small scatters of Mesolithic material recovered on the east bank of a tributary stream of the Great Stour at Charing, for instance, amounted to only 35 pieces.

Mesolithic material from HS1 Section 1 excavations was similarly scarce. Single artefacts were found redeposited in a some later contexts: microliths at South East of Eyhorne Street and Saltwood Tunnel; blades and bladelets at Cobham Golf Course, South of Snarkhurst Wood, South East of Eyhorne Street, Leda Cottages and Saltwood Tunnel; a retouched blade at Cobham Golf Course; a utilised blade at West of Northumberland Bottom; and blade cores at South of Snarkhurst Wood, Cobham Golf Course, Leda Cottages and Saltwood Tunnel (P Harding 2006b, 18–19). A single burin was also found in a later ditch context at White Horse Stone (Hayden 2006a, 24). This material is most likely to be of Late Mesolithic date (P Harding 2006b, 19). There were only three in situ assemblages of Mesolithic artefacts from the whole of HS1 Section 1: a small group of finds in an Early Mesolithic pit at Saltwood Tunnel; a sizeable Late Mesolithic assemblage from a tree-throw/working hollow at Beechbrook Wood; and a large Late Mesolithic assemblage associated with possible working areas and hearth debris at Sandway Road.

The Saltwood Tunnel Early Mesolithic pit deposit

The eight symmetrical hollow-based ‘Horsham’ points dating to the 7th millennium BC found in the upper fill of a shallow ‘pit’ at the southern edge of the Saltwood Tunnel excavation area (Pitt 6677; Fig. 3.4) is an unusual, apparently deliberate deposit. It is uncertain whether the pit was created artificially or was a natural hollow or tree-throw hole (P Harding 2006b, 20–1; Riddler and Trevarthen 2006, 7), but the close clustering of the points, their technological and morphological consistency and the lack of evidence for post-depositional disturbance suggest these objects were all buried or placed in this feature intentionally. It is notable that several had broken tips and had probably been recovered after use on one or more occasions. These may represent a ‘lost’ cache of ready-to-use arrows or unhafted points, but non-utilitarian interpretations are equally likely; it is possible, for example, that they were buried deliberately as a votive or sacrificial act (cf. Chatterton 2006, 116–19). Previous finds of two more probable Early Mesolithic oblique points on the Saltwood plateau suggests several visits to this locale during this period, perhaps reflecting the preference for plateau ‘occupation sites’ by Horsham groups noted by Reynier (1998). However, the plateau-edge position of the Saltwood pit, with wide views to the south, may be related more to the use of a hunting station overlooking animal migration routes, as suggested for the open-air Upper Palaeolithic sites investigated recently at Glaston, Rutland (Barton 2005, 116; Myers 2006), and at Bradgate Park and Launde in Leicestershire (Cooper 2006). Although Horsham finds are distributed widely across the Weald, they are very rare further to the east (Champion 2007c,
72), the closest to Saltwood being the surface finds at Harrietsham, 32km to the north-west (Jacobi 1982, 15). The Saltwood assemblage thus marks activity at the easternmost margins of the known range of groups using this kind of hunting equipment.

The Beechbrook Wood Late Mesolithic ‘camp site’
A far larger assemblage of Late Mesolithic tools and flintworking debitage, probably from a camp site, was found at Beechbrook Wood in a shallow tree-throw hole or hollow (1623; Fig. 3.5), measuring 0.35m deep and 5m diameter (Brady 2006a, 9–10). The finds comprised 1393 pieces of worked flint, including 30 microliths, predominantly scalene micro-triangles, 58 microburins, six retouched flakes and blades and nine cores (five for blade production) (P Harding 2006b, 19). Careful excavation by quadrant, together with a 1m² test trench excavated in 50mm spits in order to examine the vertical distribution of finds, indicated a greater concentration of flintwork in the western quadrant and a slight increase in the number of finds with depth, although no specific activity areas were identified. The artefacts were in fresh condition but there were no refitting pieces, which may indicate that they were redeposited from a more extensive spread or midden in the near vicinity. The lack of corticated material suggests that core preparation took place elsewhere, while the relatively high proportion of microburins (a by-product of microlith manufacture) suggests that most microliths were taken away for tool production and use (Brady 2006a, 9–10). It is notable that 219 of the artefacts had been burnt, and that small quantities (295g) of unworked burnt flint were found in the fills of the hollow, which suggests the presence of hearths nearby. No sample materials suitable for

![Figure 3.4 Saltwood Tunnel Early Mesolithic pit 6677; showing the assemblage of Horsham points](image-url)
Figure 3.5  Beechbrook Wood Late Mesolithic hollow 1623. Feature plan and section, and a selection of microlith and other finds: 1–7, microliths, including five narrow-bladed scalene microtriangles (2–6); 8–9, blade/bladelet cores; 10, piercer. See Figure 3.46 for the site location of hollow 1623.
radiocarbon dating were recovered from hollow 1623, although charcoal from a tree-throw cut by ring ditch 1021 (c. 90m to the north-east) produced a date of 6020–5840 cal BC (NZA-20049), which might relate to the wider presence of Late Mesolithic activity in this area (ibid.). The assemblage probably represents debris from a short-lived camp occupied by a small band, some of whom made microliths, using the tree-throw hollow to discard knapping waste, broken tools and burnt materials.

Sandway Road: a Late Mesolithic occupation site
The assemblage of Late Mesolithic material excavated at Sandway Road, Area C, comprising over 11,000 pieces of worked flint, is one of the largest groups of Mesolithic artefacts from a single site in south-east England. Spreads of artefacts, burnt flints and small amounts of charcoal were found in plough-truncated natural features and subsoil horizons extending across an area of about 900m² on the gravel terrace overlooking a tributary stream of the River Len (Fig. 3.6). Most of the assemblage (93%) was concentrated in a natural subcircular hollow (558), a tree-throw hole (574), and remnant ancient soil layers (550 and 569), occurring most densely in the uppermost 0.1m of deposits. The remaining artefacts were found during stripping of the colluvium (3%) and from other archaeological and natural features nearby (4%) (Trevarthen 2006, 5–11). Only 3% of the flintwork assemblage consisted of tools or tool components, including 223 microliths of mostly geometric forms (67% of retouched material) (Fig. 3.7), together with a few more retouched pieces (33% of

Figure 3.6 Sandway Road Late Mesolithic occupation site
Figure 3.7 Microliths and other lithic finds from the Sandway Road Late Mesolithic occupation site: 1–6, cores; 7–36, microliths (types after Clark 1934: 7–9 = type A10; 13 = B; 14–C1; 15-24 = D1; 25-34 = D2; 35-36 = D3); 37–39, scrapers; 40–41, burins; 42–44, piercers; 45–46, microdenticulates; 47, retouched flake; 48–49, truncated flake and blade.
locations provide some impression of the organisation of manufacture. Suitable tools, rather than more patient or diversified tool-intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid production of immediate needs, perhaps in the context of relatively intense hunting activities requiring rapid 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Triticum sp; NZA-11936). The middle of these is consistent with the expected 6th millennium BC date of the Mesolithic artefacts on typological grounds. The other age ranges suggest possible earlier Mesolithic activity in the same area, although no Early Mesolithic artefacts were recorded, together with later disturbance during the Early Bronze Age (P Harding 2006, 22–3).

**Paths, Places and Communities in the Late Mesolithic Landscape**

By c 6000 BC south-east England had been colonised by deciduous woodland, primarily oak, elm, elder and lime. Sandy soils, like those on the Greensand, may have seen the development of more open ‘dry’ oak woodland, providing good conditions for hunting (Mellars and Rheinhardt 1978), whereas areas with more dense woodland and shrub vegetation on ‘wetter’ loam and clay soils may have been especially suitable for gathering plant foods and other materials. It has been suggested that vegetation was burned off deliberately by Late Mesolithic communities to create open environments favourable for hunting (Mellars 1976; Simmons 1996; J Moore 2003), but there is no evidence to show this occurred at Sandway Road or Beechbrook Wood. The spreads of burnt flint at these sites are small and localised, suggesting camp fires rather than more extensive burning of undergrowth (P Harding 2006, 29–30). In any case, the scale of possible anthropogenic woodland clearance in the Mesolithic may have been over-estimated (Whitehouse and Smith 2004).

Evidence from HS1 Section 1 broadly reinforces the results of previous research in Kent (Fig. 3.9), suggesting concentrations of Late Mesolithic activity along the Greensand Ridge, with a thin presence on the chalklands immediately to the north and the high Weald areas to the south (P Harding 2006, 28; Scott 2004, 9). It is notable, however, that narrow blade Late Mesolithic assemblages occur in several different geo-environmental zones in Kent, including the Lower Greensand ridge (eg at Addington), the coastal plain (eg at Lower Halstow), the east Kent coast (eg at Finglesham), the northern edge of the downs (eg at Selling) and in rock shelters in the

![Figure 3.8 Sandway Road Late Mesolithic occupation site: interpretative plan of burnt flint concentrations and lithic artefact manufacturing and use areas](image-url)
central Weald (e.g. Stonewall, Chiddingstone) (P Harding 2006, 21–3). What marks out the Greensand ridge is the density of this activity: at Addington, for example, at least six Mesolithic flint scatters are known within an area of only 1.6ha (Alexander 1961). Few of these sites can be dated accurately: radiocarbon dates, for example, are available only for a stratified series of hearths at Stonewall Rock Shelter B, which span most of the 9th to 5th millennia BC (Jacobi 1982).

The closest parallels in south-east England for the features and depositional patterns recorded at Sandway Road and Beechbrook Wood can be found at several other Late Mesolithic sites with hollows/pits and large flint assemblages (Drewett et al. 1988, 17–20; P Harding 2006, 31). At Abinger, Surrey, a surface spread of tools and debitage surrounded a large oval ‘pit’ containing 1056 pieces of worked flint, including 60 microliths. Three oval features at Selmeston, Sussex, were associated with a similarly large flint assemblage, including 136 microliths. Even more striking is the evidence from four large irregular ‘pits’ excavated at Farnham, Surrey, which together contained over 39,000 pieces of worked flint including 690 microliths. These features, originally interpreted as dwellings (Clark and Rankine 1939) or flint extraction pits (Drewett et al. 1988), have been reinterpreted more recently as tree-throw holes utilised as habitation sites (Evans et al. 1999). Upturned trees/tree-boles would have had a powerful visible presence in a relatively open woodland environment, besides providing natural vertical root meshes, soil heaps and wood piles that could easily be modified and supplemented to create temporary buildings or shelters. Furthermore, the wider hollow and crushed vegetation produced by a fallen tree would create a ‘clearing’ that could be occupied without the need to fell more standing trees. It may be significant that the Lower Greensand ridge appears to have favoured the development of open woodland: the higher ground was exposed to wind blow, and trees may have been especially susceptible to uprooting because of the thin soils (P Harding 2006, 32).

The Sandway Road occupation site clearly forms part of a more extensive area of Mesolithic activity that includes the large flint scatters noted by Lord Monckton just to the south, and several sites around Harrietsham and Lenham to the west and north-west (Jacobi 1982). The assemblages from these sites are similar except for the absence of tranchet axes at Sandway Road. Such concentrations of activity, evident in many Greensand

Figure 3.9 Late Mesolithic sites and finds in south-east England. HS1 sites: 1. Sandway Road; 2. Beechbrook Wood
areas, suggest both sustained inhabitation and repeated use of specific locales that probably varied in structured ways in relation to wider patterns of landscape occupation and resource procurement (P Harding 2006, 24). In the Wey Valley at Farnham, Surrey, for example, tool assemblages showed noticeable contrasts in relation to their topographic positions, with microliths and microburins concentrated in upper slope locations overlooking the valley, while tranchet axes were found mainly at valley-bottom sites (ibid., 25). This is consistent with Barton’s (1992) model, which draws a contrast between microlith-dominated hunting camps in elevated locations and longer-term base camps in river valleys associated with axes and more diverse tool sets. The assemblages from Sandway Road and Beechbrook Wood, both dominated by microliths with very few other tool types, certainly resemble those found at the more elevated Farnham sites, as well as Rock Common and High Hurstwood, Sussex, and West Heath, Hampstead, all of which have been interpreted as hunting camps (P Harding 2006, 27–8). However, the locations of the two HS1 sites in valley-slope positions close to streams plainly diverge from Barton’s model. In fact, instead of a simple hunting camp/base camp dichotomy, it is now possible to recognise far greater variation in Late Mesolithic site categories, kinds of activity and preferred locations (Spikins 2000; Bell 2007, 326–7). Rather than the specialised hunting of large game animals tracked from hunting camps positioned close to migration routes, Late Mesolithic settlement sites seem to have favoured ‘ecotonal’ locations providing access to a diverse range of resources (Holgate 2003, 35–6). These would have varied greatly in their purpose, scale, range of activities and spatial organisation depending on the particular ecological setting, group composition, and the specific stage and type of seasonal resource availability targeted by each occupation episode.

The Late Mesolithic in south-east England is certainly typified by large numbers of mostly small, scattered occupation sites, which might well reflect a diverse subsistence base involving a high degree of mobility and dispersal (ibid., cf. Jacobi 1982). At the same time, in comparison with the Early Mesolithic there appears to have been an increase in hunter-gatherer populations, marked by extensive Late Mesolithic artefact distributions, along with prolific flint scatters resulting from repeated returns to favoured occupation areas (especially on the Blackheath/Woolwich Beds on the northern edge of the Downs, and on the Greensand; Scott 2005, 9). Indeed, the Greensand areas may have been ideal for more sustained inhabitation: water sources were never far away, the free-draining sandy soils and open woodland environments would have provided relatively comfortable camp sites, and a wide range of ecological zones were always in easy striking distance, ranging from the upland chalk downs to lower-lying clay vales and the high Wealden hills, besides the Greensand ridges themselves. Moreover, these ridges not only provided an easily-traversed east-west corridor for inter-group communication and exchange (paralleled only by the less accessible chalk escarpment ridge-top route), but also access to several major river valleys (the Darent, Medway and Stour) that cut through the downlands, linking the Wealden interior with the resource-rich coastal plains and maritime and estuarine zones to the north. The topography of the Rivers Beult, Len and Stour to the south would have been more difficult to traverse, and the Late Mesolithic sites excavated in the High Weald, including rock shelters at High Rocks and Hermitage Rocks, certainly suggest only occasional small-scale occupation by hunting parties (M Gardiner 1990, 40–2; Holgate 2003, 35–6; P Harding 2006, 24).

It is evident that the contrasting subsistence and settlement characteristics of the earlier and later Mesolithic have very different implications for the scale and spatial organisation of social groups (C Smith 1992; Spikins 2000). Although Mesolithic social structures in Britain remain little understood and are difficult to model in spatial terms, it is possible to recognise general trends: from foraging specialised hunting to collecting/broad spectrum subsistence regimes; from extensive to smaller territorial ranges; from low to high population densities; and from immediate- to delayed-return economic systems. At present, however, these socio-economic forms and processes are not easily discernible in south-east England at any scale: for example, the only strong distributional pattern in Kent (Fig. 3.9) is the concentration of Late Mesolithic finds along the northern coastal plain and the Greensand ridge, divided by the chalk downlands where far lower levels of lithic finds have been recorded (Scott 2004, 9). It is notable, in this context, that while Late Mesolithic sites along the HS1 route were well-placed to gain access to the chalk, where supplies of good quality flint were certainly used for the manufacture of tranche axes, little attempt appears to have been made to exploit these sources intensively, with preference given instead to locally available but poorer quality material. This is especially surprising in the area to the north of the River Len, where there is almost no evidence for Late Mesolithic activity despite the dense concentrations of finds on the Greensand ridge just to the south, and the presence of a major dry valley that cuts across the Downs allowing easy paths to the coast and along the escarpment to the River Stour (P Harding 2006, 28–9). The reasons for this pattern of flint procurement and landscape inhabitation are unknown, but it is possible that the ‘avoidance’ of the chalk relates to much larger-scale social, territorial and demographic structures.

The scale of possible Late Mesolithic territories remains obscure, but a settlement radius of at least 30–50km (based on ethnographic parallels and archaeological evidence) has been estimated for regional culture-area populations (ie ‘tribes’, ‘maximal bands’ or ‘connia’ in areas such as the Rhine-Maas delta and the Severn estuary (Bell 2007, 332). This organisational scale might suggest the presence of one regional group on either side of the North Downs, although the relatively rich ecotonal environments of south-east England may have supported denser hunter-gatherer populations and
thus two or more such social entities in each zone. In this settlement model, territories to the north of the Downs would have encompassed the well-watered periphery of the chalklands, the wide valleys and coastal plains to the north, and the saltwater marshes and maritime zone of the southern North Sea and Thames estuary. In contrast, territories to the south of the Downs could have stretched from the springline below the chalk escarpment, across the Greensand ridge, the inland river valleys and the clay vales and sandstone hills of the central Weald, to the Channel plains and littoral. The chalklands in between, from this perspective, might have acted as a ‘marginal’ domain of overlapping hunting ranges/resource procurement areas with relatively low levels of inhabitation and only rare encounters and exchanges between different groups (except, perhaps, along the river valleys cutting through the Downs). This is reminiscent of the far larger-scale ‘buffer zone’ or ‘resource reservoir’ suggested for the thinly-occupied English Midlands in this period (Tolan-Smith 2003b, 116). Although this idea has been questioned by Myers (2007), who argues that the character of activity in the Midlands probably relates to distinctive regional patterns of mobility and resource procurement, we are still left with the impression of complex spatial variation in densities of inhabitation and different kinds of social and economic activity, along with areas in which occupation of any kind was sparse.

The spatial pattern of Late Mesolithic activity in Kent raises interesting questions about the social identities and relationships of the people represented at Sandway Road and Beechbrook Wood. Unfortunately, it is impossible to say whether the hunter-gatherer bands that occupied these sites would have identified themselves as belonging to the same ethno-cultural community or quite different ones. There is no question that ethnic constructs distinguishing group members and outsiders have existed in recent hunter-gatherer societies, often with a strong territorial dimension associated with ideas of exclusive ‘belonging’ (Bergsvik 2003). Such identities can be expressed through material culture repertoires relating to distinctive sets of everyday practices, as well as by overt stylistic and symbolic media such as decorative devices or emblems. Specific ethnic markers, however, come to the fore only situationally and diacritically, in interactional contexts where cultural identities and their boundaries become manifest and are sometimes activated strategically in contexts of social contact, exchange or confrontation. These situations are very difficult to recognise in Mesolithic studies because of the invisibility of most Mesolithic material culture, and uncertainties about the spatial scale and structuring of hunter-gatherer societies and the kinds of interactions between them. Although microlithic styles and assemblage types in other regions have sometimes been seen as reflections of ethnic groups (eg Jacobi 1979), there is no similar evidence at present in south-east England, and in any case this observation is detached from any kind of socio-spatial model to explain how and why ethnic identities were being articulated in the first place. Moreover, different kinds of ethno-territorial sensitivity can be recognised within recent hunter-gatherer societies: for example, while overlapping hunting and foraging ranges might be largely uncontentious in terms of identity and ‘belonging’, ‘core’ sacred areas have usually been seen as exclusive to particular groups (Stanner 1965).

The other major difficulty in trying to delineate the scale and spatial structuring of Late Mesolithic territories in south-east England is the uncertain extent and character of the now-submerged plains and coastal regions of the North Sea and Channel (see Fig. 3.9). There is no question about the importance of marine resources for Late Mesolithic diets (Richards and Schulting 2003, 126), but how these were procured, and the distribution, scale and temporal intensity of coastal settlement in relation to inland residence and activity patterns are unknown. This is complicated by the likelihood of significant seasonal mobility and contrasting settlement regimes spanning diverse geographical zones at different times of year (cf. Spikins 2000; Bell 2007, 332). Although it may be possible in the future to identify underwater sites using predictive modelling and prospection techniques, and thus explore facets of the submerged archaeological record in order to reconstruct Late Mesolithic socio-economic systems in former coastal regions (Engen and Spikins 2007; cf. Mombèr 2007; Gaffney et al. 2009). There is no doubt that a substantial part of the Mesolithic settlement pattern is now invisible and substantially unrecoverable.

The Mesolithic–Neolithic transition

It is apparent that the later Mesolithic evidence from the HS1 Section 1 route is difficult to situate precisely in definable social and economic landscapes, whilst much of the wider context of social organisation and settlement in south-east England remains ambiguous at best (eg Holgate 2004). More generally, although the nature of southern British Late Mesolithic hunter-gatherer communities is perhaps a little clearer as a consequence of recent extensive programmes of fieldwork in areas such as north Kent, the specific character and structuring of Late Mesolithic ways of life at local and regional levels are still elusive. This raises particular problems for understanding the transition from a primarily ‘hunting-gathering-fishing’ society to a predominantly ‘farming’ society during the late 5th and 4th millennia BC. The absence of evidence for significant colonisation by agricultural groups, along with the evidence for continuing hunting and gathering and narrow blade lithic technologies during this period (Holgate 2004, 26–7), suggest above all that it is essential to understand the nature of the indigenous Late Mesolithic populations that may have interacted with small groups of incoming farmers and/or adopted farming and other new technologies themselves (Warren 2007; cf. Holgate 2004; Robb and Miracle 2007; J Thomas 2007a; 2008).

Unfortunately, the indigenous communities of the last centuries of the 5th millennium BC, and first centuries of
the 4th in southern Britain are still virtually ‘invisible’ in the archaeological record, as is any direct evidence for the specific nature of social change charted through even one site sequence. This lacuna is exemplified by the almost complete dearth of reliably-dated Late Mesolithic sites of the 5th millennium BC in south-east England, a pattern that still persists 30 years after the first assessment of the dating evidence (Jacobi 1982, 21–2; cf. Ellaby 2004; Holgate 2004). This pervasive ‘absence of evidence’ is the most enigmatic and challenging aspect of the Mesolithic–Neolithic transition. The fact that it persists despite recent increases in large-scale excavation projects certainly makes it difficult to account for solely in terms of insufficient fieldwork or the ‘ephemerality’ and poor dating potential of the material evidence. In this context, the loss of the coastal zones of potential Late Mesolithic/Early Neolithic settlement to sea-level rise—areas which may well have been especially densely inhabited and in which many aspects of social transition may have been first articulated and realised—offers one possible explanation for the ‘missing’ evidence and must certainly affect the extent to which the transitional period can be investigated.

Given this wider context, it is perhaps unsurprising that the evidence relating to the Mesolithic–Neolithic transition from the inland HS1 Section 1 corridor is so limited. Nonetheless, it is clear that there are no strong indications of continuity of ‘place’, or sustained inhabitation at any HS1 site, spanning the late 5th/early 4th millennia BC. It is striking that there is evidence for Late Mesolithic activity, as at Sandway Road and Beechbrook Wood, earlier Neolithic activity was very sparse (see below), and that in both cases the successive ‘Mesolithic’ and ‘Neolithic’ occupation episodes or depositional events were short-lived, spatially distanced and probably separated temporally by as much as a millennium. It is unwise to generalise too far on the basis of these few sites, especially in the context of land use and settlement regimes characterised by high levels of mobility and extensive modes of inhabitation (Whittle 1997a; Pollard 1999; Davill 2003), yet the overall impression is still one of sporadic activity, local discontinuities and a degree of social dislocation.

Although the nature of the social changes that took place during the four to five centuries around 4000 BC is thus ambiguous, there is no question that one of the striking features of the full Early Neolithic in south-east England, from c. 3800 BC, is the construction of a range of funerary monuments and enclosures in primarily chalkland locations; precisely those areas where evidence for Late Mesolithic activity is most lacking. This dramatic transformation of the cultural landscape may have had very little to do with immediate local responses to the possibilities of farming, but was perhaps more a consequence of social and economic changes much farther afield, perhaps initially in coastal regions, that led to longer-term changes in the ways that group identities and social networks were constituted. From this perspective, the Mesolithic–Neolithic ‘transitions’ recognised in inland areas in the 38th and 37th centuries BC may really be translations of events and processes that had already happened’ elsewhere, several generations if not centuries earlier.

Yet so limited is the evidence available that any major new discovery has the power to alter radically our understanding of the creation of the earliest farming communities. This highlights the exceptional significance of the evidence for Neolithic farming and cultural life in the Medway Valley, especially at the key HS1 site of White Horse Stone, where a timber long hall was built in the late 41st or 40th century BC (discussed at length in the next section). This may provide one of the first convincing insights into the nature of the initial Mesolithic–Neolithic transition in south-east England.

**Settlement and landscape in the Early Neolithic**

**The HS1 evidence in context: the Early Neolithic in Britain**

The Early Neolithic in Britain, c. 4050–3500 BC, is usually characterised by the adoption of agriculture and the construction of durable monumental architecture such as long mounds, megalithic tombs and causewayed enclosures. These structures are the most visible expressions of a far wider transformation of the cultural landscape, marked by sustained human modification of the natural environment (in the form of woodland clearances and the effects of agricultural practices, both pastoral and agrarian), the creation of enduring cultural places such as monuments and mounds, and depositional practices including deliberate placement of cultural materials in pits and other contexts (Pollard 1999; 2000; J Thomas 1999; 2008). The ‘built’ landscapes of the Early Neolithic thus seem to contrast radically with the largely unmodified ‘natural’ woodlands in which the actions of Mesolithic communities left little lasting trace. This view may be tempered in the light of new interpretations of Mesolithic forest burning, coastal middens and possible ‘monumental’ structures (such as the massive timber post settings close to Stonehenge) (ibid., 67), but there is no question that the widespread and increasingly intensive construction of durable architectural forms in wood, earth and stone in the early 4th millennium BC was both unprecedented and overtly transformative. These structures changed the appearance and configuration of the landscapes in which they were built, and created entirely new material conditions for human inhabitation, perception and agency.

At a regional scale, in south-east England, we are presented with a stark material and social contrast between the Mesolithic, evidence for which is restricted almost entirely to assemblages of lithic artefacts, and the Early Neolithic (see Figs 3.10 and 3.11) which is marked by the presence of prominent burial monuments and complex mortuary deposits, enclosures, specialised resource procurement and processing facilities (‘flint
new material culture (notably ceramics) and the adoption of agricultural technologies based on imported plant and animal species (see: Drewett et al. 1988; Drewett 2003; Champion 2007c; Healy 2008). This dichotomy does not, however, take into account the temporalities of change, nor the potentially diverse social and economic processes involved in the transformation from a wholly hunter-gatherer cultural world to one at least partly based on agricultural practices. Nor does it take into account spatial variation and population shifts over this time frame, especially in relation to the sea level rises that inundated the ancient shores and plains that once existed along the Channel coast and the north Kent littoral (Champion 2007c, 69–73; Gaffney et al. 2009, 50–3).

Current interpretations of the Mesolithic–Neolithic transition in Britain reject diffusionist ‘Neolithic package’ and colonisation models that held sway until the 1970s. Instead, the British ‘Neolithic’ has increasingly been seen primarily as a cultural rather than an economic phenomenon that arose out of indigenous acculturation, emulation, transfers of technical skills and knowledge, and architectural innovations such as funerary monuments (J Thomas 1993; 1999, 2003; Whittle 1996; Bradley 2004). There are, however, many uncertainties and divergent interpretative arguments concerning the cultural and economic importance of ‘Neolithisation’, as well as the extent and temporal rate of change during the late 5th and 4th millennia BC. In this context, new chronological frameworks, continuities in some hunter-gatherer subsistence practices and lithic technologies, and contrasting views on the significance of farming and the nature of landscape change, have raised fundamental questions about the nature of Early Neolithic society (eg J Thomas 1999, 7–33; 2003; 2007a; 2008; King 2003; Pollard 2004; Whittle 2007).

The importance of farming to subsistence and social organisation (cf. Bradley 1984; Kinnes 1988, 1994; J Thomas 1999) has been the subject of especially intense disagreement. Those who see farming as central to economic production and subsistence (eg Entwistle and Grant 1989; Richards and Hedges 1999; Rowley-Conwy 2003; Schulting 2000), have little in common with those who see farming as just one part of a diversified subsistence economy (eg Bradley 2004; Fairbairn 2000; G Jones 2000; Robinson 2000; J Thomas 1993; 1999; 2003; 2008; Whittle 2000). There are similarly opposed views concerning settlement: between those who argue for a significant sedentary element in Early Neolithic residence patterns (citing the evidence for houses in Ireland while accounting for the absence of these in Britain in terms of preservation and visibility: eg Cooney 2000a; Darvill 1996; Gibson 2003; Rowley-Conwy 2003), and those who reject the ‘farming equals sedentism’ model and argue instead for diverse patterns of residential mobility (pointing especially to the limited evidence for houses and field systems: eg J Thomas 1993, 1996; Whittle 1997a; Evans et al. 1999; Grogan 2002; Pollard 1999; 2000; 2004; Scarre 2001). The extreme rarity of Early Neolithic settlements with durable house architecture is indeed puzzling, but if the impact of early farming was relatively localised and episodic, with more emphasis on herding than cultivation and continuing reliance on hunting and gathering practices (J Thomas 2008, 72), then residence patterns are indeed likely to have involved a high degree of mobility, while permanently occupied settlements were correspondingly less significant. In such a landscape of shifting settlement, ‘monuments’ rather than ‘houses’, it is argued, provided the significant fixed points around which the social worlds of Early Neolithic communities were organised.

At a national scale, the chronology of the Mesolithic–Early Neolithic transition and the development of distinctive Early Neolithic societies is now becoming a great deal clearer. Julian Thomas’ influential model of cultural Neolithicisation (1991b; 1999, fig. 2.1), which gave primacy to new social practices and beliefs focused on monuments and novel kinds of material culture as the prime movers of cultural change (rejecting ‘traditional’ models of economic causation), saw the appearance of monuments, enclosures and timber halls, as well as domesticates and agricultural technologies, as parallel processes that all started in the period c 4200–4000 BC. This framework does not require a ‘formative Neolithic’ preceding the period of monument building, as Kinnes once proposed (1988, 6), because the making of monuments and other new practices are directly implicated in the creation of a Neolithic way of life rather than simply products of economic and social changes. Indeed, the take-up of farming and related economic activities is seen as a gradual process facilitated by cultural changes, rather than the other way around. Although Thomas’s interpretation has been challenged (eg Rowley-Conwy 2003; 2004), it is used widely to account for the limited evidence for arable farming and sedentism in the 4th millennium BC, and thus the likelihood of residential mobility and fluid settlement patterns (J Thomas 1996b; Whittle 1997; Pollard, 1999; 2000; 2004).

This general interpretation may well need rethinking, however, to take account of major reassessments of Early Neolithic chronology based on new and more precise dating evidence (Barber et al. 1999; Bayliss et al. 2008; Bradley 2008; Whittle 2007; Whittle et al. 2007; Whittle et al. 2011). These studies are now revealing well-defined chronological ‘horizons’, major thresholds of cultural change, and sequences in the phasing of material categories and practices, with the suggestion of relatively rapid social and economic changes during the late 5th and early 4th millennia BC. These new chronological insights can be summarised as follows:

1. There is no strong evidence, as Bradley has emphasised, for agriculture anywhere in Britain prior to c 4050 BC (2007, 32). When farming does appear, however, it seems to be adopted rapidly and widely over large areas, with considerable commitment to arable cultivation in the period 4050–3700 BC, after which cereals decline in significance (Bradley 2008).
The earliest dates for pottery in Britain are consistent with this phase, especially the evidence from well-dated Carinated Bowl assemblages, often from pit group contexts (Herne 1988; Sheridan 2007; J Thomas 2008, 75–7).

2. There is good evidence for flint mines being worked from the very beginning of the 4th millennium BC (Barber et al. 1999; Whittle et al. 2011, 255–62), while the evidence from the two most reliably-dated timber ‘long houses’ in southern Britain (at Yarnton, Oxfordshire, and White Horse Stone on the HS1 route; discussed below) suggests these also date to the same early phase of the Neolithic (J Thomas 2008, 79–80; Whittle et al. 2011, 840–42), contemporary with the earliest evidence for farmed resources and ceramics found in pit contexts.

3. The construction of most chambered tombs and earthen long mounds, in contrast, appears to have taken place later, during a relatively narrow time span within the period c 3750–3400 BC (Whittle et al. 2007, 125–7). In most cases this involved short-term building events (rather than long drawn-out ‘projects’), with mortuary deposition at each monument rarely lasting more than a century (c 3–5 generations). Although there may be some earlier funerary monuments in western Britain, such as ‘dolmens’, simple passage graves and ‘rotunda graves’ (Darvill 2004, 46–66, fig. 33), and possibly also in south-east Britain, such as the Coldrum tomb in the Medway Valley (Whittle et al. 2007, 127; 2011, 381–3; Wysocki, et al. in prep.), it is evident that what was once an archetypal component of the Early Neolithic in fact belongs not to the earliest phase but more to the latter part of the period.

4. The same point can be made with regard to causewayed enclosures, the construction dates for which all fall within the period c 3750–3500 BC (Whittle et al. 2011, 684). The first appearance of these enclosures in the mid-38th century BC, with the most intensive period of enclosure circuit construction during the early 37th century BC, and their abandonment in the 34th–33rd centuries BC, also places their construction and primary use firmly in the latter half of this phase.

Figure 3.10 Map of Initial Neolithic monuments, other sites and Carinated Bowl finds in south-east England, c 4050–3750 cal BC. HS1 sites: 1. White Horse Stone; 2. Beechbrook Wood; 3. Saltwood Tunnel

In this light, we can now differentiate between two ‘earlier Neolithic’ phases. The first of these, which could be termed an ‘initial’ or ‘formative’ Neolithic (c. 4050–3750 BC; see Fig. 3.10 for the distribution of sites of this period in south-east England) is marked by a sharp break with the cultural repertoires of the Late Mesolithic and more or less synchronous transformations in several key areas of cultural life, including the first presence of domesticates, cereal cultivation, pit-digging practices, ceramic technology, the deposition of Carinated and other Undecorated Bowl pottery, flint mining and large timber buildings (J Thomas 2008, 79), together with a few early funerary monuments. The second phase, which could perhaps still be termed the ‘Early Neolithic’ (c. 3750–3500 BC; see Fig. 3.11 for south-east England), is marked by the ‘classic’ range of funerary monuments, complex mortuary deposition, causewayed enclosures and Decorated Bowl ceramics typically associated with early farming communities in Britain, though with relatively little arable farming and greater emphasis instead on livestock, especially cattle. The significant decline in cereal cultivation following the short-lived ‘pioneering’ phase of the initial Neolithic (Bradley 2008) may not have been reversed until the late 3rd or even early 2nd millennium BC. At present, however, there is no consensus with regard to a new period terminology, which in any case could soon be superseded by finer-grained chronological schemes (working to a scale of single centuries or even human generations). It may well be safest at present to use the term ‘Early Neolithic’ as a broad descriptor for material evidence of the period c. 4050–3500 BC, while differentiating between earlier and later parts of this age span where possible.

In this context, the Early Neolithic evidence from High Speed 1 Section 1 is exceptionally important in several respects, above all because of the discovery of the very rare timber building at White Horse Stone (Hayden 2006a). This structure is one of only five or six Early Neolithic post-built hall-like structures known in
southern Britain, and in many ways is the best preserved. It was found amidst a wider scatter of earlier Neolithic pits and tree-hollows comparable with similar features at other sites excavated along the HS1 route, such as Sandway Road, Tutt Hill, and Beechbrook Wood. These sites offer intriguing insights into the nature of social life at the very beginning of the 4th millennium BC and again raise questions about the nature of ‘settlement’ in this period. It is especially important, however, to recognise from the start that these sites provide a series of ‘windows’ into a cultural world profoundly different to our own. One of the greatest challenges in Neolithic archaeology is to embrace this ‘otherness’ (J Thomas 1999; Whittle 2003) and find ways to make sense of the unfamiliar and often unique cultural repertoires that developed in Britain in this period. In particular, the significance of Neolithic pits, and deposits of artefacts and other cultural materials found in ‘dug’ features and natural hollows such as tree-throws, become more comprehensible once their wider social and landscape contexts are appreciated (cf. Evans et al. 1999; J Thomas 1999, 62–123; Pollard 2002; Woodward 2002c).

**Pits, pots and lithic artefact scatters: making sense of the Early Neolithic landscape**

There are six sites along the HS1 route with evidence for Early Neolithic activity in the form of deposits of cultural materials in pits or natural features: White Horse Stone, Eyhorne Street, Sandway Road, Tutt Hill, Beechbrook Wood, and Saltwood Tunnel. Palaeoenvironmental evidence from some of these sites also allows the reconstruction of aspects of the local environmental conditions in the early to mid-4th millennium BC and thus a wider understanding of the Early Neolithic landscape.

At White Horse Stone (see Fig. 3.17 below), four natural hollows and a tree-throw pre-dated the construction of the timber building. The two larger hollows contained flint debitage, burnt flint and a few sherds of Early Neolithic pottery (Hayden 2006a). Another 16 natural features in the vicinity of the building but unrelated to it stratigraphically contained similar artefact assemblages, including possible Carinated Bowl sherds, as well as small amounts of charcoal and animal bone. These deposits could be contemporary with building use but just as easily pre- or post-date it. There was no evidence, however, for prior Late Mesolithic activity (Stafford, in Hayden 2006a, 19–20), and no indication that the location of the timber building was chosen because it was already a significant locale in terms of earlier cultural practices or attachments to ‘place’. Episodic activity did occur in the same area for an extended period after the building went out of use, although this does not seem to have involved any attempt to ‘reference’ or re-occupy the site of the structure. Early Neolithic pottery and lithic artefacts of mid-4th millennium BC date (including Mildenhall style Decorated Bowl pottery) were also found in a tree-throw and in two later Bronze Age postholes in the south-west part of the excavation area (Hayden 2006a, 63–6). Molluscan evidence from postholes belonging to the timber building, and from tree-throws nearby, suggests a local woodland environment, with small areas of open grassland or scrub nearby (Stafford 2006b, 18, tbl.2; cf. Giorgi and Stafford 2006, 17). This may suggest highly localised clearance, perhaps in advance of building construction, within an otherwise wooded landscape. There was certainly no evidence for extensive grazed grassland or cereal cultivation anywhere close to the excavated area during the Early Neolithic.

At Eyhorne Street, Hollingbourne, an assemblage of probably redeposited Ebbsfleet style pottery was recovered from the upper fill of an undated pit or ditch terminal (F100). Tree-throw holes and hollows along the south-western side of the site also in some cases contained Neolithic flintwork, including one large assemblage that probably relates to a knapping event within or beside an open tree-throw hole (F188; Hayden 2006b, 7–8). At Sandway Road, Lenham, an assemblage of Early Neolithic pottery found in an animal burrow cutting the fill of a large tree-throw hollow probably represents occupation debris introduced from a since-truncated surface layer (Trevarthen 2006, 12). Assemblages of Middle Neolithic pottery including both Mortlake and Ebbsfleet styles were recovered from other tree-throw holes, natural hollows and a possible pit on the same site. At Tutt Hill, sherds of Early Neolithic plain bowl and Ebbsfleet Ware pottery were found in charcoal-rich deposits in two pits and a tree-throw hole (all undated). These were buried by a layer of colluvium that accumulated after later prehistoric woodland clearance and ploughing (Brady 2006b, 17–18).

At Beechbrook Wood, a single Early Neolithic pit (Feature 1910; Brady 2006a, 11–12: Fig. 3.12) contained a large flint assemblage (671 pieces) that is almost indistinguishable technologically from Late Mesolithic flintwork in a nearby tree-throw hole (P Harding 2006, 35). The Early Neolithic assemblage, which appears to have been carefully selected, included five soft-hammer struck cores, blades and bladelets, several retouched tools and a serrated flake with edge gloss suggesting use for cutting silica-rich plants such as cereals. It is notable that many of the unretouched flakes and blades showed signs of use-wear and that as much as half of the assemblage had been used in some way (ibid., 43). The flintwork was associated with a complete ironstone saddle quern placed on the base of the pit, together with Plain Bowl pottery sherds (from a large open vessel and a small bowl) and burnt unworked flint. This material appears to have been deposited as a deliberate ritualised act that brought together flintworking residues, flint artefacts with both ‘Mesolithic’ and ‘Neolithic’ attributes, fragments of new ceramic objects and artefacts concerned with agricultural practices. Considering the likely date of the deposit early in the 4th millennium BC, it is possible that its particular composition had special symbolic significance in the way that it integrated new subsistence technologies and artefact types with the material repertoires of hunter-
gatherer practices. Other Early Neolithic pits with deliberate deposits that include quern fragments and/or grinding stones are known elsewhere in Kent at Mill Road, Deal (Dunning 1966, 1) and Wingham (Greenfield 1960a).

Finally, at Saltwood Tunnel, three small pits containing Early Neolithic pottery (Fig. 3.13) were found near the east end of the site (Pits 136, 175, 317) (Riddler and Trevarthen 2006, 8–9). The ceramic assemblages consisted of sherds from a number of incomplete vessels, including a Whitehawk-style decorated bowl (Pit 317), plain shouldered and hemispherical bowls (Pit 136), and a cordoned bowl and a carinated vessel (Pit 175). In two cases (Pits 136, 175), the pit fills also contained charcoal and charred plant remains, fragmentary burnt and unburnt animal bone, and worked and burnt flint. As at Beechbrook Wood, the lithic artefacts included an especially high proportion of tools and utilised flakes and blades, with relatively little evidence for flint chips and other knapping debitage (P Harding 2006, 43). The charred plant remains from the pit fills were dominated by hazelnut shells but also included emmer wheat and barley grains, indicating processing and consumption of both wild and farmed resources (Giorgi and Stafford 2006, 18; Riddler and Trevarthen 2006, 9). Apart from the White Horse Stone building, these pits are the only radiocarbon-dated Early Neolithic features from the entire HS1 Section 1 corridor, in both cases producing high value dates from short-life sample materials (charred hazelnut shells) in primary depositional contexts. The Pit 136 deposit was dated to 3650–3380 cal BC (NZA-20599) and the Pit 175 deposit to...
Figure 3.13 Saltwood Tunnel Early Neolithic pits 136, 175 and 317: site plan, and pit sections with associated Early Neolithic ceramic artefacts. Pit 317: P7, shoulder sherd from a carinated bowl with incised decoration just above the carination. Pit 136: P6, plain uncarinated open bowl; P5, shoulder of a carinated bowl. Pit 175: P4, upper part of a small bowl with a horizontal cordon.
3640–3370 cal BC (NZA-20600). The calibration plots also suggest that the depositional events probably took place in the earlier parts of the age ranges in both cases, within the period c. 3650–3500 BC, which is consistent with wider dating of Whitehawk-style plain and decorated ceramics.

Although the Early Neolithic sites investigated on the HS1 route from Holywell Combe to White Horse Stone are all located on the south side of the chalk downland escarpment, they occupy diverse geological and topographical locations. These range from the base of a chalkland combe at White Horse Stone, to a relatively elevated Greensand hillside location overlooking the Stour valley at Tutt Hill. The fact that the Early Neolithic evidence at all these sites is remarkably similar suggests that the landscape, and social actions within it, were not subject to major classificatory distinctions or strategic decisions determined by soil, elevation or aspect. Instead, the existence of a more or less heavily wooded landscape, with undulating terrain and easy access to water sources everywhere in this part of the HS1 corridor, suggests one broad landscape zone traversing the northern Weald and southern edge of the Downs in which short-term occupation sites were chosen on the basis of localised and temporally-specific group- and activity-related criteria.

The nature of this activity, however, remains obscure and it is possible to suggest many different kinds of social practice and inhabitation. These range from sedentary settlement foci for multiple spatially-overlapping economic activities, through many diverse types of episodic occupation events related to the procurement of specific resources within wooded and other environments, to special events for ‘ritual’ or ‘ceremonial’ performances (eg rites of passage conducted in ‘liminal’ places; Garwood 2011). The social practices represented at a contextual level range from apparently routine discard of cultural materials in middens or surface occupation layers (eg at White Horse Stone and Sandway Road), through single knapping events (eg in Eyhorne Street tree-throw hole F188), to ritualised depositional acts (Beechbrook Wood Pit F1910). It is important to recognise, of course, that these kinds of social practices and landscape utilisation are in no sense mutually exclusive, although at any one time they may have been separated spatially for both practical and symbolic reasons.

The same range of deposits is apparent at other non-monument sites throughout Kent in both pit contexts and natural features (see Champion 2007c, 74–5). Indeed, Healy argues (2008) that the whole of the landscape was used in some way or another, even if episodically and non-intensively, and that occupation sites were widespread. It is notable that wherever Early Neolithic pits, occupation deposits and flint working sites have been recorded in the region, they are very similar to those encountered along the HS1 route in terms of their formal and depositional characteristics and the diverse practices represented. These kinds of sites are clearly not restricted to particular geo-environmental or topographic zones but occur in many different landscape contexts. It is possible to discern some geographical variation in the relative emphasis placed on different kinds of activities on the basis of large-scale distributions of surface finds such as arrowheads and axe heads (cf. J. Gardiner 1984), but these are not exclusive and their particular social and economic significance is open to alternative interpretations (Healy 2008).

Pits and pit groups are certainly pervasive features of the British Neolithic (J Thomas 1999, 62–74), so much so that they could be seen as the defining feature of Early Neolithic occupation practices, rather than ‘monuments’, which are sometimes absent altogether, appearing less and less typical of cultural life in this period across Britain as a whole (Ray 2007, 71–2). The purpose and significance of pits and pit deposits, however, remain problematic (discussed in more detail below in relation to Grooved Ware pits). It is possible that some were used for routine tasks within or around occupation sites, and a general relationship between pits and settlement is widely acknowledged (cf. Garrow et al. 2005; Garrow 2007b; J Harding 2006; Lamdin-Whymark 2008a, 100–28; J Thomas 1999, 64–88), yet the structured nature of some pit deposits suggests these resulted from ritualised modes of social action (ibid.; J Harding 2006). It is clear that we are confronted here with unfamiliar, spatially extensive kinds of behaviour that could involve repeated visits to the same locations at short intervals of months or years, as well as unconnected occupation events separated by centuries (Garrow 2007a; 2007b). It is difficult to suggest specific social interpretations, however, because the duration and frequency of pit use cannot be determined in precise chronological terms, and their spatial organisation—even if related to contemporary practices—is usually uncertain as the full extent of most pit groups is unknown. This is certainly true of the examples recorded along the HS1 route, which provide us with local ‘snapshots’ of Early Neolithic activity and a diverse range of practices, but little information about their landscape settings or social contexts. These sites, and the thin scatters of surface finds from fieldwalking surveys (P. Harding 2006, 36–7), offer only a general picture of the Early Neolithic landscape, dominated by long-term patterns of relatively ephemeral, low-intensity and short-lived occupation events in a mostly woodland environment.

This view is consistent with recent interpretations of the Mesolithic–Neolithic transition and the impact of Early Neolithic ‘farming’ communities on the environment. There is evidence throughout Britain to support the view that woodland clearance in the 4th millennium BC was very limited in scale, sometimes transient, with only small-scale and possibly discontinuous agrarian production (where this was present at all) (T Allen et al. 2004; Austin 2000; Brown 2000; Pollard 2004). There is some indication that fields were sometimes maintained for many years (Bogaard and Jones 2007, 367–70), with considerable local investment in cereal production, but these seem to be features of the initial phase of the Neolithic (c. 4050–3700 BC) rather than characteristic of the Early Neolithic as a whole (cf. Bradley 2008). Although deforestation may have been cumulatively expansive over the 4th and 3rd millennia BC, it appears
to have been uneven in tempo and spatially variable, even in areas of large-scale monument building such as Wessex (M Allen 1997; Gillings et al. 2008, 172–99). This process accelerated in all parts of Britain only from the mid-2nd millennium BC, marked by evidence for far more extensive woodland clearance (in some areas for the first time) alongside intensive agrarian production practices, field systems and large-scale land division (cf. Bradley 2007, 187–96; Garwood 2007c, 196–7).

Environmental evidence from south-east England for the period c 4500–3500 BC is extremely limited and often ambiguous. Woodland appears to have been prevalent at most chalkland sites but there also seems to have been considerable variation over short distances in the density of tree cover and the extent of grassland and scrub (Giorgi and Stafford 2006, 22). It is certainly evident that great care needs to be taken not to generalise from single sites, as the variation in dry valley colluviation sequences in Sussex demonstrates (Wilkinson 2003). Reconstructions of local palaeoenvironments are also rare, and are usually over-reliant on just one principal kind of palaeoenvironmental indicator. The identification of clearance before c 3000 BC and woodland regeneration on the edge of the chalk escarpment at Brook near Ashford, for example, is based almost entirely on molluscan evidence (Kerney et al. 1964). Even so, a general picture of the Early Neolithic landscape has been built up from a number of site-specific analyses of diverse palaeoenvironmental data, including lithostratigraphic and molluscan studies of colluviation sequences (eg from Brook and Holywell Combe: ibid.; Preece and Bridgland 1998; cf. Wilkinson 2003), rare pollen evidence (Thorley 1981; M Allen et al. 2008, 269–71), relatively common charred plant remains, especially from pit and ditch contexts (eg at Saltwood Tunnel and Kingsborough Farm: Giorgi and Stafford 2006, 18; M Allen et al. 2008, 271–4), and the presence of tree-throw holes and root boles containing cultural materials at nearly all Early Neolithic sites. Taken together, this range of evidence seems to confirm that earlier clearances were localised and subject to cycles of woodland/scrub regeneration (Giorgi and Stafford 2006, 22). There may, however, be significant exceptions, such as the area around the Kingsborough enclosures on the Isle of Sheppey, where there is evidence for open grassland and cereal farming (M Allen et al. 2008, 271), and in the low-lying coastal zone now covered by the North Kent marshes which appears to have been dry grassland and open scrub woodland throughout the Neolithic (ibid., 278).

Overall, therefore, we should imagine that extensive ‘treescapes’ existed in the early and mid-4th millennium BC in the areas transected by the HS1 corridor. Even the places occupied by monument-building groups and more committed agricultural communities along this route were still dominated by relatively dense tree cover. The significance of woodland domains for Early Neolithic social experience and perception, in terms of both routine ‘economic’ and special ‘ritual’ practices, has only recently become a prominent interpretative theme in Neolithic studies (eg Austin 2000; Cummings and Whittle 2003; Evans et al. 1999; Pollard 2004; 2005), but there is little question that the resources, experiential qualities and mythological and symbolic associations attached to trees and forests must have been diverse and sometimes all-encompassing (Bloch 2005). Considering the limited evidence for farming, it is possible that many early clearances were not for agricultural purposes but primarily in order to create open spaces for constructing monumental buildings, mounds and enclosures. This may well have included attempts to enhance the visibility of monuments within the landscape, to give them special prominence as foci for asserting social identities, and as powerful statements of human success in overcoming natural forces and the chaos of the ‘wild’, reconfiguring and perhaps domesticating the relationship between humans and the natural world (Pollard 2004; Whittle and Pollard 1999, 384). Ethnographically, the symbolic significance and aesthetic appreciation of trees and forests vary greatly from one cultural context to another but are often central to cosmological schemes and many different kinds of agency. Ideals of cultural and political order among the Zafimaniry people of eastern Madagascar, for example, are articulated in terms of successful rainforest clearance (overcoming the forces of nature), house and settlement ‘growth’ (reproduction), and an aesthetic of human achievement and transcendence that emphasises the visibility (clarity) and relative elevation of cultural places in the forest landscape (Bloch 1995a).

**Places of special virtue: monuments and houses in the Neolithic landscape**

In this light, the presence of durable architectural edifices, such as mounds, enclosures and timber buildings, becomes all the more striking in the densely wooded Early Neolithic cultural landscape. These were places of very special significance, around which more fluid everyday social practices were structured (J Thomas 1999, 34–53). In contrast with Sussex, which has long had a prominent place in wider interpretative discussions of Early Neolithic monumentality and social organisations (eg Drewett et al. 1988; Oswald et al. 2001, 117–18; Drewett 2003), our understanding of these monuments in Kent has been subject to serious evaluation only recently (Champion 2007c, 75–83; Healy 2008).

The distinctive distribution of Early Neolithic megalithic structures and long mounds in Kent has been recognised for some time (eg Holgate 1981; Drewett et al. 1988, 56–60; Ashbee 1993). These form two clusters of monuments (see Figs 3.11, 3.29, 3.30), both located on the south side of the chalk escarpment where major rivers cut through the Downs. To the west, in the Medway Valley, two separate groups of megalithic sites are situated on either side of the river to the north and west of Maidstone. To the east, three earthen long mounds have a dispersed distribution in the Stour Valley to the north of Ashford, with one site on each side of the...
river and the third located further downriver on the eastern valley side. This long-established ‘pattern’ in the evidence may, however, need revision in the light of new discoveries of possible Early Neolithic monuments in Kent through air photographic survey (12 possible long barrow sites: Bewley et al. 2004, 72) and developer-funded excavation (eg long enclosures or plough-truncated long barrows at Tollgate near Gravesend and at Northdown on Thanet: Bull 2006b, 10; Dinwiddy and Barclay 2009). This challenges previous assumptions about the absence of such monuments from the North Downs and other parts of Kent on which previous appraisals of the evidence have been based, usually in comparison with the well-known downsland distribution of long mounds on the South Downs (Drewett et al. 1988, 52–62).

These discoveries build on another dramatic recent change in perceptions of the Early Neolithic landscapes of Kent. Causewayed enclosures have figured prominently in social interpretations of this period since the 1920s (eg Oswald et al. 2001, 15–26), in part informed by a notable series of excavations of Sussex enclosures (especially at Whitehawk, Combe Hill, Offham Hill and Bury Hill), yet such sites until recently appeared to be entirely lacking in Kent (Drewett et al. 1988, 44; Barber 1997). This raised the possibility that enclosures were not part of the social fabric of Early Neolithic communities in this part of south-east England, or that they awaited discovery in riverine or other landscape contexts similar to enclosure sites in the Thames Valley (eg Staines) or the Essex coastal plain (Orsett) (Drewett et al. 1988, 44). In the late 1990s, however, our understanding of the Early Neolithic in south-east England was transformed as a result of a series of independent discoveries of causewayed enclosures at several sites in Kent (Dyson et al. 2000; Oswald et al. 2001, 81; Champion 2007c, 81; Hammond 2007; Healy 2008).

An especially striking feature of the Kent enclosures is the existence of adjacent ‘paired’ sites at Ramsgate on the Isle of Thanet, where there is evidence for at least two (possibly three) enclosures on the hills overlooking Pegwell Bay (Champion 2007c, 81–3; Lis Dyson pers. comm.), and at Kingsborough, on the Isle of Sheppey, where two enclosure sites were located on the highest part of the island (M. Allen et al. 2008). A causewayed enclosure is also known at Burham in the Medway Valley close to the eastern group of megalithic monuments (discussed below), and another possible site shown on air photographs may exist on the Downs at Eastry near Dover (Oswald et al. 2001, 153). Plainly, the potential for further new discoveries is considerable, especially through air photographic survey (Bewley et al. 2004) and the potential use of LiDAR for investigating woodland areas of western Kent. The excavated enclosure sites in Kent, the dating of which has recently been analysed in detail by Whittle et al. (2011), are amongst the earliest in Britain. The main Chalk Hill enclosure was initially constructed in the period 3740–3690 cal BC (ibid., 375), while Kingsborough 2 and 1 were probably built in c 3710–3635 cal BC and 3660–3580 cal BC respectively (ibid., 370–1).

It is apparent that nearly all of the Early Neolithic funerary monuments and enclosures in Kent are located in chalkland settings, the only exceptions being two megalithic sites on the Greensand: Addington long barrow and The Chestnuts chambered tomb (Ashbee 2000). The HS1 Section 1 corridor, in this wider geo-cultural context, provides an extremely valuable transect across both Greensand and chalkland zones for evaluating the presence of monumental structures in hitherto unexplored parts of the Kent landscape. It is especially striking, therefore, that despite extensive survey and excavation, the presence of Early Neolithic features and artefacts, and the proximity of the HS1 route to known monument sites in both the Medway and Stour valleys, this work produced no evidence of any kind for Neolithic monuments in the Greensand areas between Saltwood Tunnel and Hollingbourne. In the chalkland area to the west of the Medway, in contrast, a ‘long enclosure’ site of Early or Middle Neolithic date (Loveday 2006) was identified at Tollgate, Gravesend (now preserved in situ beside the HS1 route; Bull 2006b, 10), reinforcing the general chalkland emphasis of Early Neolithic monument-building.

The discovery of three clusters of sarsen stones at Tollgate, to the east of Church Road, prompted speculation that these might be collapsed or demolished megalithic structures (ibid., 10–11). These comprised about 40 stones altogether, the largest just over 2m in length, some of which had been burnt or had fairly fresh breaks and plough strikes. There was, however, no direct structural or artefactual evidence to support their interpretation as destroyed monuments, and the only possible find amongst the stones could be interpreted as either an exceptionally large saddle quern or an eroded sarsen boulder. Sarsen stone groups are a natural feature of the North Downs landscape, formed by Pleistocene periglacial and solifluxion processes that produced clusters and wider scatters of stones close to or on land surfaces (Ullyott et al. 1998). It is most likely that the sarsen deposits at Tollgate are natural features of this kind, although some of the stones were clearly moved and damaged by human activity in the medieval period or more recently. Medieval features recorded nearby, including a cobbled surface, hearth, postholes and burnt sarsen fragments, were associated with pottery dating to c AD 1100–1250. This activity may relate to field clearance activities when sarsens were broken up and sometimes destroyed by fire-setting (a process well-attested in the Avebury landscape during the early 18th century, but very unusual at other times and rarely documented elsewhere in Britain: Gillings et al. 2008, 291–364).

Although the archaeological work carried out along HS1 Section 1 does not add a great deal to our knowledge of Early Neolithic monuments or enclosures, it did produce one of the most significant and striking contributions to our understanding of this period in south-east England and Britain more widely: the
Figure 3.14 Locations of the Early Neolithic timber long halls at White Horse Stone (Structure 4806) and Pilgrim’s Way (Structure 972). Contours show modern surface topography.
discovery of the large timber building at White Horse Stone and the remains of a second similar building on the Pilgrim’s Way site nearby. As noted above, these structures belong to the late 5th or early 4th millennium BC, at the very earliest stage in the development of insular agricultural communities.

The Early Neolithic timber buildings at White Horse Stone and Pilgrim’s Way

The Early Neolithic buildings

The White Horse Stone and Pilgrim’s Way excavations, described in detail by Hayden (2006a), comprised two extensive open-area sites extending for a total distance of about 525m north-west to south-east, and 160m east-west, the two excavation areas being divided by a gap up to 18m wide on the line of the Pilgrim’s Way footpath (Fig. 3.14). The excavated areas lie mainly within the western arm and tail of a Y-shaped dry valley, situated between two prominent chalkland spurs on the south side of the North Downs escarpment. This part of the valley slopes steeply southwards to the base of the spurs then shelves more gently south-westwards towards the River Medway about 2km away. The base of the dry valley was filled with Late Pleistocene and Holocene deposits up to 2.5m in depth, while thin topsoils covered the valley sides. A notable feature of the Pleistocene deposits in the south-eastern corner of the White Horse Stone site was the presence of about 70 sarsen boulders, redeposited in the base of the dry valley by periglacial processes. These must have been at least partly visible in the Early Neolithic landscape (Fig. 3.15).

The two timber structures consisted of one definite building, located approximately 90m from the southern end of the White Horse Stone excavation area, and a second probable building situated in the far south-east corner of the Pilgrim’s Way site. The White Horse Stone building, situated on a steep slope close to the base of the dry valley and protected by colluvial deposits, was far better preserved than the Pilgrim’s Way structure, which was positioned higher up the valley side beneath a thin topsoil. Although the two buildings were built some 280m apart and in different positions in relation to the configuration of the dry valley, the long axis of the southern half of the slightly angled White Horse Stone building appears to be aligned directly on the Pilgrim’s Way structure. This suggests that even if the two were not in contemporary use, one was built with reference to the other in terms of landscape positioning and orientation.

The thin modern topsoils across the northern part of the White Horse Stone site and most of the Pilgrim’s Way site were removed by machine to reveal eroded and plough-truncated features cut directly into the natural chalk. In the southern parts of the White Horse Stone site, in contrast, where deep colluvial fills had accumulated (Fig. 3.16), the deposits had to be machine-excavated in three phases: first, to the top of the archaeo-

ological horizons marked by Roman features; second, to the top of the Iron Age soil; and, third, to the chalk bedrock where Neolithic features were evident. The Iron Age soil in this area directly overlay the Late Glacial sediments and Neolithic features. The most difficult interpretative problem, in this context, is the absence of early–mid Holocene buried soils and colluvial deposits, including floor layers associated with the White Horse Stone building. This may indicate a major gap in the sediment sequence for the period c 8000–500 BC caused by extreme high-energy erosion processes. The absence of pre-Bronze Age soils and colluvium in dry valleys, widely noted in south-east England, has been interpreted as evidence for extensive truncation during the late 2nd or early 1st millennia BC (eg M Allen 1992), although the causes, frequency, severity and precise chronology of these processes are unknown.

The apparent absence of Early to Mid-Holocene soils may not, however, be due entirely—or even largely—to erosion events. It was evident at White Horse Stone that the colluvial deposits on the upper western slopes of the valley were cut by a Middle Bronze Age ditch (4025), which suggests that erosion processes here were not as extreme, extensive or sustained as one reading of the evidence suggests. At the same time, there was no evidence from sub-colluvial contexts in any part of the site for gullying of the chalk bedrock, scouring of the dry valley floor/sides, or deposition of sediments in a high-energy environment, in contrast with the evidence from the top of the Iron Age buried soil (Stafford, in Hayden 2006a, 15–17). In this light, the soils in the valley may have been subject instead to continuous biological reworking over a long period of relatively stable soil conditions, interspersed with occasional short periods of localised erosion and colluviation, until the late Iron Age or Roman period when they were finally buried by much deeper colluvial deposits. Thin-section examination of fills of Late Neolithic and possible Early Bronze Age features at White Horse Stone/Pilgrim’s Way certainly indicate that soils in the immediate vicinity were humic rendzinas, which suggests little or no surface erosion during these periods. This issue has a direct bearing on interpretations of the timber building, the floor layers of which were not identified in the course of excavation (discussed in more detail below).

The White Horse Stone building (Structure 4806)

The White Horse Stone building (Figs 3.17–19), measuring 17.5m in length and 6.5–7m in width, consisted of six longitudinal rows of posts oriented NNW–SSE, and at least nine (possibly 10) transverse rows of posts oriented WSW–ENE (Hayden 2006a, 30). The interior rows of postholes in both the northern and southern halves of the building contained the largest posts, generally over 0.31m across, while slightly smaller posts, 0.16–0.31m across, were used for the outer rows (Fig. 3.19). Outside the lines of the bedding trenches, to both east and west, were widely spaced lines of posts of varying size, mostly relatively slight, which appear to represent linear ‘porches’ or roof supports along both
sides of the building. The gap between the bedding gullies on the west side probably marks the location of a doorway about halfway along the length of the building (ibid., 33). Where post pipes could be distinguished from post packing, all of the posts were circular. In terms of basic architectural design, therefore, it appears that the large internal posts carried most of the weight of the roof, while the wall posts and the external ‘porch’ posts on the long sides of the building supported just the wall structures, possible doorway and the outer edges of the roof.

The corners of the building were marked by multiple post settings, probably for strengthening the main building frame. The two shallow bedding gullies, 0.07–0.09m deep, on the east and west sides of the northern half of the structure, and a single short bedding gully 0.14m deep on the south-west side, almost certainly mark the lines of the east and west walls. The bedding trenches probably contained short sleeper-beam foundations either for vertically-set plank walls, or for additional vertical posts (between those erected in postholes) to support lightweight walling such as wattle- or wickerwork panels, bark shingles and/or horizontally-laid planking. The absence of similar gullies at the north
and south ends, and on the south-east side, cannot be explained by differential erosion given the preservation of the recorded gullies and other insubstantial features such as small postholes, so the external walls in these areas must have been built in a different fashion to those along the bedding trenches. As no traces of daub were found in micromorphological analyses of soil samples from posthole contexts it is most likely that all the walls were built using light wooden hurdles, woven panels or planking.

The northern end of the building had a substantial wall consisting of two slightly angled and offset lines of close-set posts. This was formed by adding posts between the main structural timbers at the ends of the longitudinal rows. The very southern end of the structure, in contrast, lacked evidence for a continuous wall. Although disturbance by shallow natural features was more marked in this area, this would not have affected the survival of deep postholes, and in any case the undisturbed parts of the structure at the south end included numerous small post settings along with a few widely spaced larger postholes. It is probable, therefore, that the south end of the building consisted of a lighter timber-frame wall, perhaps with a wide entrance, or even that it was open-ended or could be opened temporarily by removing wattle screens. It is also conceivable that the large posts at the southern ends of the longitudinal rows originally formed the main southern end wall, while the smaller postholes/stakeholes at the south-east and south-west corners represent a rectangular open-sided extension at this end of the building. Alternatively, the slighter postholes and stakeholes at the south end, especially those at the south-east corner, may have formed parts of quite separate Late Neolithic structures or fencelines (discussed in more detail below). Either way, given the lie of the land and the likelihood that the immediate landscape was wooded, it is evident that the widest views to be had from the building lay to the south and south-east, and that portals or wall openings at this end of the building would have maximised the amount of daylight reaching the interior of the building. The possible entrance on the western side, in contrast, would have opened onto the valley side, where the rising ground and any vegetation cover would have blocked views to the west and south-west and severely limited the amount of light entering the building from that direction.

The basic architectural form of the White Horse Stone building is thus uncertain, and is complicated still further by its topographic position and the possibility of a multi-phase construction sequence. The position of the building, angled downslope across the contours on a steep part of the western valley side, with a 1.8m drop in height from the northern to the southern end of the structure, was clearly not dictated by local topography or ease of construction. There was no evidence for terracing or raised earth or chalk platforms to create level floor areas, so the interior ground surface of the building must instead have been steeply angled, with an average overall
Figure 3.17 White Horse Stone long hall, Structure 4806: plan showing constructional elements (postholes and gullies), together with pre-building features and other features not related stratigraphically to the building but probably Neolithic or earlier in date (including natural tree-throw holes and hollows)
gradient of 1:10. It is possible, of course, that raised plank floors were built within the building, although this would probably have required more elaborate and substantial internal post-settings. It is also surprising that if the roof was built more or less on a level as both Hayden and Davies assume (Hayden 2006a, 32; cf. Davies 2006, 126–7; figs 5.3.2–5.3.11), the south end of the building must have been considerably taller (c 1.5m) and with greater weight loads than the north end, yet the postholes in the southern half of the structure appear to have been no more deeply-cut than their northern counterparts. Although this may perhaps have been due to greater surface erosion and truncation of the upper parts of postholes (Hayden 2006a, 30), the survival of small stake holes at the south-east corner, the bedding gully along the south-west side, and hearth 4830 in the middle of the southern half of the building, suggests this is unlikely. It is possible, therefore, that the roof structure was pitched longitudinally as well as to the sides, perhaps in a complex multi-faceted fashion.

One distinctive feature of the building architecture which has attracted surprisingly little attention is its angled or ‘bent’ ground plan and contrasting two-unit compartmental design (eg there is only brief comment by Hayden: 2006a, 54; though see Davies 2006, 121–5). The northern unit takes the form of a short trapezoid, both in the layout of the opposed bedding gullies and in the internal longitudinal alignments of posts. Using the gullies as a guide, this was approximately 8.0m long, 6.8m wide at the south end, and 6.2m wide at the north end. The largest posts form the penultimate transverse row southwards, while the southernmost transverse row at/beyond the ends of the bedding gullies consists of flimsier posts. The southern unit, in contrast, is more rectangular rather than trapezoidal in plan (this is especially apparent in the symmetrical grid lay-out of the post settings), measuring approximately 8.6m in length and 6.6–6.8m in width. This has a short bedding trench present on just one side, and has a different orientation to the northern part of the building. The closest correspondence in design between the two components, in fact, is the presence of larger posts in the two central longitudinal rows, suggesting that the load-bearing qualities of the timber frames and the forms of the roof structures were similar in each case. It is probable, therefore, that while the internal post settings supported a continuous pitched roof with a central longitudinal ridge, the angled layout of the structure and the contrasting ground plans of the northern and southern units strongly suggest it was built in more than one stage, the basic design emulated as the building was extended.

In this light, it is likely that the White Horse Stone building was a two-phase structure. One possible interpretation is that the northern part of the building was built first, to a trapezoidal design with a more lightly-built southern end. This structure was then extended down-slope by the more rectangular building unit, on a slightly different alignment to the northern part but still replicating the more lightly-built character of the structure’s southern end. Because of the different alignments the ‘gap’ between the two building units narrows markedly from west to east, and it is possible that some of the small posts in this area were added in order to support a ‘bridging’ section of roof between the two parts of the building. Although there may have been several reasons for extension and re-alignment of the structure, it is striking that the southern part of the building is oriented directly on another Neolithic timber building some 240m to the south-east (Structure 972). It is equally possible, however, that the southern unit was built first while the northern part represents the later extension. The basic design and construction sequence of the White Horse Stone building can thus be interpreted in three main ways (Fig. 3.20):

1. A single-build, angled structure.
2. A two-phase structure comprising an earlier northern trapezoidal building that was later extended southwards by the addition of the southern rectangular building unit.
3. A two-phase structure comprising an earlier southern
rectangular building that was later extended northwards by the addition of the northern trapezoidal building unit.

The second option is preferred by the present author, as the change in building orientation can perhaps be accounted for most easily as a way of referring to a new feature in the cultural landscape, Structure 972, which may not have existed when the trapezoidal building was erected. The designs of these buildings are considered further below in the context of a comparative discussion of Early and Middle Neolithic timber architecture in Britain and north-west Europe.

Considering the general level of preservation of the White Horse Stone building, it is striking that there is almost no evidence for internal structures or activity areas. Two oval features recorded within the area of the building may represent hearths, but the group of Grooved Ware sherds from one of these (Feature 4874) suggests this almost certainly belongs to a later phase of activity associated with the Late Neolithic buildings nearby. The other hearth, Feature 4830, was situated just west of the central axis of the southern part of the structure and thus appears more likely to be part of the internal lay-out of the building. This feature, which was 0.62 x 0.48m across and 0.18m deep, had a burnt base

Figure 3.19 White Horse Stone Early Neolithic long hall: plan of the building, with sections of structural and other features
and contained oak and Maloideae charcoal and small fragments of burnt bone, as well as a single tiny Grooved Ware sherd which could—conceivably—have been introduced into an Early Neolithic deposit by later biotic activity. Both hearth features produced radiocarbon dates consistent with those from the postholes of the Early Neolithic building (see below), but in one case at least (4874) this seems to have derived from residual charcoal, and the same may well apply in the other case as well.

There is also no direct evidence for a specific arrangement of internal partitions, ‘rooms’ or other spatial divisions. Although it is quite likely that these existed (eg see Davies’ attempt to visualise the building architecture using 3-D modeling techniques: 2006, 121–36), there is no particular reason to adopt one reconstruction over another. With the evidence available, therefore, it is not possible to determine the internal spatial organisation of the building based on structural elements or built features, and indeed we have to accept that many alternative scenarios are possible.

A similar level of uncertainty applies to the contexts and spatial patterning of materials deposited within the structure (Fig. 3.21). One of the greatest interpretative difficulties with the White Horse Stone building is the apparent absence of floor layers even though the survival of structural and internal features such as the smaller postholes, stakeholes, wall gullies and the contemporary or later Neolithic hearths suggests that the degree of erosion is likely to have been limited. The lack of direct evidence for the removal of floor layers either through deliberate clearance (eg terracing) or natural erosional processes (such as ‘flash-flood’ events), strongly suggests that the original floors were either eroded gradually by biological agents (to the point of being indistinguishable from natural sediments), and/or they were inadvertently destroyed when the overlying colluvial deposits were removed by machine. These layers may, in any case, have been very thin and possibly no more than compacted (trampled) topsoil to begin with. Phosphate analysis of the interior was unproductive as even ‘high’ values fell close to background levels, while micromorphological analysis of posthole fills showed no evidence for the presence of dung or burnt dung (Macphail and Crowther 2006), which strongly suggests that the building was not used for animal stabling.

The finds assemblages from the Early Neolithic building consisted almost entirely of very small pottery, bone and flint fragments collected by sieving. These were all recovered from posthole contexts except for a few finds from Gully 5031 (Hayden 2006a, 38, 41). There were 66 sherds of Early Neolithic pottery from the area of the building (total weight of just 138g), all worn and abraded but attributable to the Early Neolithic Bowl tradition, including a few possible Carinated Bowl sherds (Whittle et al. 2011, 379). A total assemblage of 428 flint artefacts were found in structural and other features associated with the building, consisting mainly of small chips but including a few flakes. The predominance of micro-debitage suggests that episodes of flint knapping took place within or around the building, while the

Figure 3.20 Three alternative interpretations of the White Horse Stone Early Neolithic long hall construction sequence: (i). single-build structure; (ii). primary northern trapezoidal building, with added rectangular building unit to south; (iii). primary southern rectangular building, with trapezoidal building unit added to north
absence of retouched pieces and broken tool fragments suggests that tool use in this area was either very limited or involved relatively light tasks. A large assemblage of flint artefacts was also recovered from the buried soil overlying the building, including numerous flint chips but also retouched tools. It has been suggested that this material derived from practices that took place within the building (Hayden 2006a, 39), but it is equally possible

Figure 3.21 White Horse Stone long hall: distributions of Early Neolithic artefacts, animal bones and burnt flint in excavated features
that it relates to later activities in the area of the building, possibly centuries after it was abandoned. Only one identifiable animal bone fragment was found in a feature definitely associated with the Early Neolithic structure: a cattle molar in posthole 4902. Identifiable charred plant remains and charcoal fragments were nearly as scarce, comprising only a single grain of wheat (posthole 5280), unidentified cereal grains and a fragment of hazelnut shell (posthole 4817), and small quantities of charcoal in several postholes, including oak, ash, hazel/alder and Maloideae, alongside some residual Early Holocene pine charcoal (Stafford 2006b).

Many of the artefacts and bone fragments were burnt, presumably having been raked out of hearths or moved from other places of burning at some stage during their depositional histories, whether within the building or elsewhere. It has been suggested that this material represents occupation debris that was trampled, crushed and 'scuffed' around the floor of the building before collecting in hollows around standing posts, subsequently being incorporated in the fills of the structural features as the posts decayed (Hayden 2006a, 44). Larger items, it is supposed, were removed in the course of cleaning activities and re-used or discarded somewhere outside the structure. At one level, this is a convincing enough interpretation of the limited evidence, although it is notable that the absence of a definite Early Neolithic hearth, limited signs of burning in general, and the lack of any overall pattern in the distribution of burnt material, must raise questions about where, how and when items were burnt. Although it is possible to identify spatial patterns in the deposition of different material categories (see Fig. 3.21), especially the relatively higher concentrations of flint knapping debris at the northern end of the building, unburnt bone around the middle of the structure, burnt bone at the southern end, and pottery outside the southern end of the building, the extent to which this relates to some level of spatial organisation and perhaps separation of different activities when the building was in use is uncertain. The fact that overall distributions of different finds categories were fairly even and widespread, and that only very small amounts of material were recovered, all from building foundations, makes it very difficult to draw specific conclusions about possible building use. This issue becomes further complicated if the building is seen as a two-phase extended structure, in which case the 'pattern' of material deposition in itself be used as a basis for making a particular chronological interpretation of the building phases. Certainly, the finds assemblages recovered from definite pre-building contexts, such as the fills of hollows 5255 and 5380, are very similar to those from posthole contexts. Hayden takes the view that most of the finds relate to building use, suggesting that material which accumulated during the life of the structure became incorporated into pre-building contexts through taphonomic processes (eg by burrowing rodents). This seems extremely doubtful as a general explanation of finds deposition: it might be expected, for example, that Grooved Ware, which is present in several features within and around the structure, would also have been incorporated in both building and pre-building features in the same way that Early Neolithic finds supposedly were, but this is not the case. It is far more likely, in fact, that the finds recovered from the White Horse Stone building comprise a mixed assemblage derived from more than one phase of activity, including re-deposited pre-building material, and that the spatial 'patterns' identified relate as much to pre- and post-building activities as they do to occupation practices within the standing structure.

The White Horse Stone building is presently the best dated Early Neolithic 'long hall' in Britain (see M Allen 2006). Eleven radiocarbon dates were obtained from contexts associated with the building (see Appendix 3), four of which can be excluded from dating the structure itself. Two dates on pine charcoal from postholes 5113 and 4834 produced Early Holocene age ranges (8530–8280 cal BC and 7600–7520 cal BC) and must derive from redeposited ancient charcoal. The dates from hearths 4830 and 4874 probably derive from Early Neolithic charcoal redeposited in Late Neolithic contexts. As the hearths cannot be associated directly with the Early Neolithic building on architectural or stratigraphic grounds, the value of samples from these contexts for dating the building would have been doubtful anyway. The remaining seven dates (one from posthole 5280 in the central part of the building; and six from postholes 4820 (two dates), 4817 (three dates) and 4902 (one date) close to or at the southern end of the building) fall within the period 4050–3530 cal BC (Table 3.1). Unfortunately, it is not possible to distinguish potential construction phases chronologically, or carry out Bayesian statistical modelling to compare the dating of the two building units, as all but one of the seven relevant radiocarbon dates derive from the southernmost part of the building. The remaining date, from posthole 5280, whilst falling in the earlier part (3960–3660 cal BC) of the overall calibrated age range for the date series, is also the least precise (Table 3.1) and certainly cannot in itself be used as a basis for making a particular chronological interpretation either way.

The first application of Bayesian modelling to narrow the overall age range and estimate the span of time during which the building was in use (M Allen 2006; M Allen et al. 2006), based on the assumptions that it represents a single, continuous phase of activity and that the dates are evenly distributed throughout the period of use, produced a range of 3980–3630 cal BC (Hayden 2006a, 45–7). More recently, all nine early 4th millennium dates have
Figure 3.22 Pilgrim’s Way Early Neolithic long hall, Structure 972: plan of the postholes of the building and other Neolithic features including the Middle Neolithic pit group.
been remodelled as part of the comprehensive chronological analysis of British causewayed enclosures and other Early Neolithic site categories by Whittle et al. (2011). The new model suggests the long hall was probably built in 4065–3940 BC and abandoned in 3745–3635 BC, having been used over a period of c. 300–350 years (ibid., 379–81, fig. 7.26). Although this may be too simplistic if it was indeed a two-phase building, nonetheless the dating model suggests initial construction during the late 41st or early 40th century BC, making the White Horse Stone long hall presently the earliest well-dated Neolithic structure in Britain.

The Pilgrim’s Way building (Structure 972)
A second rectangular post-built structure (972), probably also Early Neolithic in date, was found 240m to the south-east of the White Horse Stone building amongst a cluster of pits and other features on the west slope of the dry valley, close to the south-east corner of the Pilgrim’s Way site. This structure, first recognised by Alistair Barclay, consisted of two roughly parallel lines of posts some 10.5m in length and 2.5–3.3m apart, aligned north-west to south-east (Fig. 3.22). The post lines had a slightly bowed appearance in plan, especially on the western side, so that the gap between the rows was wider in the middle and narrower at the ends. In most cases the postholes formed opposed pairs spaced at fairly regular intervals, though several lacked partners in the opposite postholes. Posthole 972 do closely resemble parts of the White Horse Stone building, the southern half of which appears to be aligned on the Pilgrim’s Way structure. It is likely, therefore, that two contemporary, spatially inter-referenced timber buildings existed in close proximity in the Early Neolithic landscape.

### Table 3.1 Radiocarbon dates for the White Horse Stone Early Neolithic long hall (Structure 4806).

<table>
<thead>
<tr>
<th>Feature</th>
<th>Lab No.</th>
<th>Sample material</th>
<th>ΔC13</th>
<th>Uncalibrated date bp</th>
<th>Calibrated date (cal BC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posthole 5280</td>
<td>NZA-21504</td>
<td>Charred grain (Triticum)</td>
<td>-25.98</td>
<td>5007 +/- 75</td>
<td>3960-3660</td>
</tr>
<tr>
<td>Posthole 4820</td>
<td>NZA-21729</td>
<td>Maloideae charcoal</td>
<td>-25.13</td>
<td>5123 +/- 30</td>
<td>3880-3800</td>
</tr>
<tr>
<td>Posthole 4817</td>
<td>NZA-21770</td>
<td>Burnt animal bone (unidentified)</td>
<td>-17.4</td>
<td>4949 +/- 30</td>
<td>3800-3660</td>
</tr>
<tr>
<td>Posthole 5280</td>
<td>NZA-21504</td>
<td>Charred hazelnut shell</td>
<td>-23.98</td>
<td>5067 +/- 30</td>
<td>3960-3790</td>
</tr>
<tr>
<td>Posthole 4902</td>
<td>NZA-21278</td>
<td>Cattle molar</td>
<td>-25.40</td>
<td>5123 +/- 30</td>
<td>3880-3800</td>
</tr>
<tr>
<td>Heath 4874 (Late Neolithic)</td>
<td>NZA-21506</td>
<td>Charred grain (unidentified)</td>
<td>-26.54</td>
<td>5039 +/- 30</td>
<td>3960-3770</td>
</tr>
<tr>
<td>Heath 4830 (Late Neolithic)</td>
<td>KIA-25383</td>
<td>Maloideae charcoal</td>
<td>-25.22</td>
<td>5165 +/- 31</td>
<td>4050-3810</td>
</tr>
</tbody>
</table>

The White Horse Stone and Pilgrim’s Way buildings in insular context

The White Horse Stone and Pilgrim’s Way ‘longhouses’ are significant additions to the very small number of substantial rectangular timber buildings of Neolithic date recorded in Britain (Darvill 1996; Bradley 2007, 38–9), although there are far more numerous examples in Ireland (now over 100: Cooney 2000, 54; Grogan 1996, 2002; Smyth 2007). These were probably all built within the period 4000–3400 BC, though this wide age range may encompass a great deal of regional variation and one or more narrower temporal phases of building construction, as Smyth has suggested for Ireland (ibid., 233–34) and Alistair Barclay has proposed for England (pers. comm.; discussed further below).

One of the most notable features of Early Neolithic British and Irish timber structures is their great diversity in terms of spatial designs, scale, constructional technologies and associated material deposits, all of which continue to escape easy classification. Darvill’s attempt to use construction methods and ground plans as the basis for a building typology (1996) was constrained by the very limited number of examples for comparative analysis and by the lack of dating evidence. Further attempts to distinguish building types based on the number of post rows or post arrangements (eg Hayden 2006a, 55–6) do not seem to offer a stronger basis for identifying shared building traditions or specific influences. As Figure 3.23 shows, the ground plans of the British post-built structures exhibit almost no shared design features of any kind. Distinctive construction techniques may show a little more patterning but this is
Figure 3.23 Comparative plans of Early Neolithic buildings in Britain and Ireland, showing variation in size, shape, post settings, presence of bedding trenches, and building orientations: 1. Yarnton, Oxfordshire (Hey with Robinson 2011, fig.11.6); 2. Lismore Fields A, Derbyshire (Garton 1991, fig.1.2); 3. White Horse Stone, Kent (Hayden 2006a, fig.13); 4. Llandegai I, Gwynedd (Lynch and Musson 2004, fig.8); 5. Fengate, Cambridgeshire (Pryor 1974, fig.5); 6. Horton, Berkshire (Hey with Robinson 2011, fig.11.8); 7. Ballyglass I, Co. Mayo (Ó Nualláin 1972, fig.2); 8. Tankardstown I, Co. Limerick (Grogan 1996, fig.4.2); 9. Tankardstown 2, Co. Limerick (Grogan 1996, fig.4.2); 10. Ballinagilly, Co. Tyrone (ApSimon 1969, fig.1); 11. Corbally I, Co. Kildare (Purcell 2002, fig.3); 12. Balleygalley 1, Co. Antrim (Grogan 1996, fig.4.2); 13. Thornhill E, Co. Derry (Smyth 2007, fig.2); 14. Newtown, Co. Meath (Smyth 2007, fig.2); 15. Claish Farm, Stirlingshire (Barclay et al. 2002, illus.23); 16. Balbridie, Grampian (Brophy 2007, fig.7).
never exclusive or simply related to a wider set of building attributes. Vertical plank construction, for example, appears to have been used widely in Ireland for both long rectangular and shorter more square-shaped buildings (Groghan 1996, 43), including sites such as Ballyglass 1, County Mayo (Ó Nualláin 1972), Ballyharry, County Antrim (D. Moore 2003), and Ballynagilly, County Tyrone (Alistair Barclay pers. comm.; Wessex Archaeology 2009).

Kingsmead Quarry, Horton, Berkshire (Alistair Barclay excavated building with distinctive concave end walls at bedding-trenches such as the Padholme Road building at Lismore Fields B (Garton 1991) or with continuous square one- or two-room structures, either post-built like 2011, 227–36), though most are small short-rectangular/square buildings (Groghan 1996, 43), including sites such as Ballyglass 1, County Mayo (Ó Nualláin 1972). Most other Early Neolithic buildings in Britain and Ireland, however, appear to have been designed as complete single-build structures and few have strong evidence for major episodes of repair or extension.

It may be more helpful to reformulate the variation evident at ground level in relation to possible building superstructures. This highlights a different set of contrasts, especially between those buildings which had internal grid-like settings of substantial posts forming the main load-bearing elements, with only lightweight external walling, and those which had bedding trenches holding more substantial load-bearing vertical post- and plank-built walls, with only a few internal timber post settings—if any—to support roof structures. These constructional forms are not exclusive, as the White Horse Stone building demonstrates, and it is possible that shallow bedding trenches may have been destroyed at post-built sites truncated by ploughing, but nonetheless this does seem to be a real contrast with important implications for construction methods and building use. The close-set arrays of vertical timbers, some massive, in the post-built forms suggest they were designed to support tall buildings (perhaps with an upper storey) and/or heavy roofs (possibly plank-built, for example). At the same time, these post arrangements may have been used to create durable internal compartments while constraining the amount of open space inside for social activities. In contrast, the buildings with bedding-trench foundations are often wider and shorter than the post-built structures and the lack of substantial earth-fast internal posts suggests that roof structures must have been relatively light, perhaps thatched. These seem to have been designed to maximise the amount of open interior space and/or to allow for considerable flexibility in spatial organisation (eg by using temporary screens or lightweight partitions). Yet another category of large rectangular buildings, lacking ground-fast timber structural elements entirely, may possibly be represented in the evidence from pit groups in eastern England, which define ‘open areas’ of a size comparable to known timber structures (Bradley 2007, 44, fig. 2.5; Garrow et al. 2005). It is assumed the superstructures of such buildings, if they existed, consisted mainly of turf, clay or cob walls, and/or lightweight post, stake and wattle components.

On present evidence, larger and more substantial rectangular post-built structures seem to be relatively more common in England and Wales, while the buildings with continuous bedding trenches appear to be relatively more common in Ireland. There may also be a chronological distinction (Barclay and McCulloch 2009): post-built structures appear to be broadly earlier, with current dates for construction falling mainly in the period 3950–3650 BC, whereas buildings with bedding trenches seem to broadly later (cf. Smyth 2007). However, recent
detailed analysis and modelling of the radiocarbon dates for Irish houses suggest that these were all built and used within a very short time-frame, c 3715–3615 cal BC (Whittle et al. 2011, 598). A similar short period of construction and use is indicated for the massive Scottish timber halls at Crathes, Balbridie and Claish, between c 3780 and 3645 cal BC (ibid., 832–3). It is therefore likely that complex chronological sequences and distinctive short-duration architectural styles will be recognised in the future at a regional level in other parts of Britain as well. Indeed, the great diversity of rectangular post-built timber structures in England and Wales, in terms of their...

Figure 3.24 Early Neolithic rectangular post-built buildings in Britain and Ireland. Detailed plans of the closest parallels to the White Horse Stone and Pilgrim’s Way buildings: 1. White Horse Stone, Kent (Hayden 2006a, fig.13); 2. Llandegai 1, Gwynedd (Lynch and Musson 2004, fig.8); 3. Lismore Fields A, Derbyshire (Garton 1991, fig. 1.2); 4. Ballyglass 1 Co. Mayo (Ó Nualláin 1972, fig. 2); 5. Yarnton, Oxfordshire (Hey with Robinson 2011, fig.11.6)
shapes, sizes, internal divisions and design features, seems to be indicative of construction events that varied in frequency and form from one area to another and over time, depending on selective and perhaps highly localised applications of building techniques and styles.

**Times and places for 'longhouses': European perspectives**

Parallels for British Early Neolithic timber buildings have often been sought in continental Europe, where Neolithic longhouses are widespread, especially to discover possible 'origins' for insular traditions of rectangular building construction. The early date of the White Horse Stone and Pilgrim's Way buildings, and their location in south-eastern England, invite renewed debate about continental sources of inspiration for these structures and possibly direct ethno-cultural influences (eg through population movement or emulation).

Interpretations of Neolithic long timber buildings in Britain still rely at least partly on comparisons with central and north-west European Early and Middle Neolithic Linearbandkeramik (LBK) and Post-LBK settlement architecture of the period c 5700–4500 BC (Villeneuve-St Germain, early Rössen, Grossgartach, Stichbandkeramik, and early Lengyel cultures) (for relevant chronological and terminological schemes see Last 1996, fig. 3.1; Whittle 1996, fig. 6.3; J Thomas 1996a, fig. 17.2; Andersen 1997, fig. 179). This frame of reference still seems remarkably resilient, even in the light of Thomas' incisive critique of LBK-inspired 'house' interpretations of British timber halls (1996b), which showed that these comparisons lacked validity in chronological and cultural terms.

Although comparisons with LBK and post-LBK buildings may be instructive from an architectural perspective, it is apparent that a considerable span of time (500–700 years) separates these classic 'longhouses' from British and Irish timber buildings of the early 4th millennium BC. It is also notable that post-LBK buildings are a great deal rarer than LBK longhouses and far more varied in architectural terms (cf. Coudart 1998; Hampel 1989; Last 1996), suggesting a process of regionalisation, short-lived design styles, local settlement variation and a general trend towards greater residential mobility that prefigures the British pattern. Despite superficial resemblances in terms of rectilinearity (Fig. 3.25), insular buildings are flimsier and smaller (c 7–22m in length) than LBK and post-LBK buildings (most of which range between 15 and 40m in length), and their straight-sided rectangular shape is quite unlike the trapezoid and naviform shapes of post-LBK structures (Coudart 1998, 74–6). Moreover, unlike British timber buildings, LBK and post-LBK longhouses usually occur in clusters of 4–10 buildings and often in landscape areas which saw sustained occupation over many centuries (eg in the Merzbach valley; Lüning and Stehli 1994). The dense material deposits found in and around many of these buildings, interpreted as occupation debris, are also largely absent from British examples, which again suggests different kinds of inhabitation if not different functions entirely.

In this light, it is misleading to expect direct emulation of continental forms of architecture that were not only distant in time, space, and cultural context, but already declining in terms of their social and economic significance and landscape presence a thousand years before ‘similar’ buildings were constructed in Britain. It is far more appropriate instead to look for parallels amongst the buildings of the north-west European Middle and Late Neolithic and early Chalcolithic in the late 5th and early 4th millennia BC, which immediately prefigured or were contemporary with those of the British ‘Early Neolithic’ (cf. J Thomas 1996b, 5–6). It is surely in these spatially, temporally and culturally ‘closer’ contexts, when the transmission of ‘Neolithic’ ideas, technologies, materials and living things from the continent must first have taken place (J Thomas 2007a, 428–30; 2008, 62–5), that exogenous origins for the presence of rectangular timber architecture in Britain are best sought.

It is immediately apparent that continental Middle Neolithic buildings of the Cerny and Rössen cultural phases in France, western Germany and the Low Countries are notable for their rarity, spatial isolation/dispersal and relatively low levels of associated artefacts and other cultural material. This pattern is plainly far more similar to the British situation than LBK and post-LBK settlement archaeology. In central-northern France, for example, there are no definite durable timber buildings associated with Cerny material culture (c 4600–4100 BC), marking a radical break with the post-LBK phase of long house building in this area (Mordant and Simonin 1997, 319). In north-east France and north-west Germany late Rössen buildings are extremely rare and also mark a clear break with earlier longhouse traditions in being smaller and having only two or three rooms at most, such as Schernau house 1 (Last 1996, 36; Lüning 1981), the buildings at Berry-au-Bac and Osly-Courtil in the Aisne area of north-east France (Dubouloz 1991; Dubouloz 2000), and the building at Cairon, Normandy, sealed beneath a passage grave (Clément-Saulieu et al. 2000).

Hayden argues that the buildings at Berry-au-Bac and Osly-Courtil, dating to c 4300–4100 BC, provide the closest parallels for the timber structures at White Horse Stone/Pilgrim’s Way (2006a, 56). All three sites have rectangular post-built buildings of broadly similar shape and size, with bedding gullies and internal partitions present at the largest building at Berry-au-Bac and White Horse Stone, and the structures at Osly-Courtil and White Horse Stone both have lateral rows of four posts (see Fig. 3.25). The three smaller buildings at Berry-au-Bac are also similar to Lismore Fields B (Garton 1991, fig. 1.2) and in form and size to the two-room bedding-trench structures in Ireland such as Corbally 3 (Purcell 2002), Coolfore 2 (Ó Drisceoil 2003) and Tankardstown 1 (Grogan 1996, fig. 4.2), and in Britain at Fenge and Gorhambury (Darvill 1996, fig. 6.5).

In other respects, however, the associations made are tenuous. The late Rössen buildings at Berry-au-Bac and
Osly-Courtil are at least 200 and perhaps 500 years older than the British structures and there are presently no known material culture connections suggesting shared traditions of practice or interactions across these regions over this span of time. Moreover, whilst they have some similar attributes the buildings are not really close parallels architecturally. The Berry-au-Bac and Osly-Courtil buildings are slightly larger in size, relatively

Figure 3.25 Comparative plans of Early/Middle Neolithic buildings in north-west Europe dating to the 5th millennium BC: 1. Berry-au-Bac/La Croix Maigret, Aisne, Picardie, France (Coudart 1998, fig.123); 2. Bochum-Kirchharpen, Kr. Bochum, Nordrhein-Westfalen, Germany (Coudart 1998, fig.172); 3. Echilleuses/Les Dépendances de Digny building 1, Loiret, Centre, France (Coudart 1998, fig.178); 4. Osly-Courtil building 150, Aisne, Picardie, France (Dubouloz 2000); 5. Berry-au-Bac building 206, Aisne, Picardie, France (Dubouloz 2000); 7. House 1, Hambach 260, Kr. Düren, Nordrhein-Westfalen, Germany (Coudart 1998, fig.179); 8. White Horse Stone, Kent (Hayden 2006a, fig.13)
interaction involving the spread or emulation of building vast geographical range, suggests there was little cultural contexts and spatial organisations of buildings across this period are very rare and seem to be entirely absent of this period are very rare and seem to be entirely absent. J Thomas 2008, 74–7). Just as striking as the few similar-types spanning the Channel or North Sea (Sheridan 2007; there are no material culture ‘packages’ or shared ceramic none is very close in formal or constructional terms and illustrates, once again, the dangers inherent in formal comparisons based only on selected empirical attributes such as shape, size and number of post rows. The same points can be made when comparing the White Horse Stone and Pilgrim’s Way structures with Late Neolithic and Chalcolithic buildings of the Chasséen, Michelsberg and Trichterbecher (TRB) ‘cultures’ of northern France, the Low Countries, northern Germany and southern Scandinavia (see Midgley 1992, 317–41; Last 1996, 35–8; Whittle 1996, 215–39). The early parts of these cultural phases are contemporary with the British and Irish Early Neolithic and it is possible to identify some parallels in terms of building architecture, although none is very close in formal or constructional terms and there are no material culture ‘packages’ or shared ceramic types spanning the Channel or North Sea (Sheridan 2007; J Thomas 2008, 74–7). Just as striking as the few similarities are the many and varied contrasts. Durable buildings of this period are very rare and seem to be entirely absent in some periods and areas, including Flanders (Vermeersch and Burnez-Lanotte 1998, 47) and in Chasséen areas in France (Whittle 1996, 233, 332). Examples of especially distinctive but localised or even unique kinds of architecture (eg the huge rectangular structures recorded only at Mairy in the Ardennes; Marolle 1998), and the great variety of landscape contexts and spatial organisations of buildings across this vast geographical range, suggests there was little cultural interaction involving the spread or emulation of building styles. In many cases, the ambiguities of the structural and material culture evidence are such that the once-accepted ‘domestic settlement’ function of these buildings is increasingly open to question, not only among British prehistorians but also more widely. Two western Michelsberg enclosures, for example, have evidence for internal buildings but in both cases the character and purpose of these are uncertain. At Thieusies, in central Belgium (Vermeersch and Walter 1980), these consisted of small ephemeral structures (c 5 x 3.5m) with close-set arrays of posts that may have been impractical for residential purposes (Hayden 2006a) and instead suggest non-domestic uses such as elevated granaries or ceremonial platforms. At Mairy in eastern France (Marolle 1998), at least 20 very large rectangular timber structures (the complete examples ranging between 10–13m wide and 20–60m long, with bedding trenches up to 1.5m deep), may not have been roofed (as also suggested for the Balfarg Riding School and Littleour ‘halls’ in Scotland; Brophy 2007, 83–6) and have been likened to contemporary clusters of funerary monuments and ceremonial long enclosures (Mordant 1989, 44; Andersen 1997, n.224).

In northern Germany and south Scandinavia, Michelsberg and TRB-associated buildings (Fig. 3.26) appear more like ‘houses’ but are still very rare and are often difficult to interpret (Midgley 1992, 324–41). In the case of the D-shaped building at Hanstedgård in Denmark, for example, it was noted that even though it provided the least ambiguous evidence for a Nordic TRB dwelling, a reconstruction was “not self-evident” (Eriksen and Madsen 1984, 70). There are few close architectural parallels for the White Horse Stone building, although the post-built structure at Piledal, Skåne, in southern Sweden (Tilley 1996, fig. 4.6), is similar in terms of its size and two-unit angled lay-out, consisting of a trapezoidal or bowed-walled building with a rectilinear extension at its west end (see Fig. 3.26, no. 5). A common feature of the continental Middle Neolithic evidence is the apparent isolation or dispersal of buildings, although ‘occupation areas’ may be extensive, as at Flögeln in north Germany (Zimmermann 1979, abb.14) and Runegård East, Bornholm, in Denmark (Kempfner-Jorgensen and Watt 1985, 94–8). Only in the Danish archipelago and southern Sweden is there evidence for relatively dense and more sustained settlement sites, sometimes with series of buildings, as at Limensgård and Groðbygård, Bornholm (Nielsen 1999; Kempfner-Jorgensen and Watt 1985), and Kabusa IVb, Skåne (Tilley 1996, 175). Similar settlement foci comprising groups of buildings, both dispersed and nucleated, are also known further south, for example in central Germany at Wallendorf (Midgley 1992, 320, 331–33, fig. 94), and in Baden-Württemburg at Hochdorf (Keefe 1988) and the Goldberg (Bersu 1936).

In most cases, unlike contemporary British structures, these buildings are associated with significant material deposits which may have resulted from everyday inhabitation practices, although other interpretations are possible. South Scandinavian buildings, for example, were often located close to funerary monuments, which suggests that even if they were occupied in a domestic sense they may have served special functions or social groups (eg at Stengade; Bradley 2005, 62–4). In addition, there are a number of short rectangular house-like structures in Jutland, dating to the later 4th and early 3rd
millennia BC, interpreted as cult houses or temples: these are c. 5 x 6m in size with plank-built walls set in bedding trenches (very similar to the smaller Irish buildings) and associated with large deposits of pottery and evidence for burning (e.g. at Ferslev, Tustrup and Herrup) (Tilley 1996, 275–9; Larsson 2008, 198–9).

By evaluating the full range of evidence for settlement architecture in north-west Europe in the late 5th and early 4th millennia BC it becomes clear just how few timber buildings are known and the great variety of their designs, scales and constructional features. From this perspective, supposed contrasts between Britain and continental Europe in terms of the relative presence/absence of durable timber buildings are misleading; such buildings were relatively rare, dispersed and locally diverse everywhere. In this light the surprise sometimes expressed about the ‘enigmatic’ nature of the British ‘longhouse’ evidence seems misplaced. In this wider chronological and cultural context the diverse British and Irish buildings appear more like regional variations on broadly shared north-west European architectural themes that were realised locally in terms of distinctive modes of cultural expression, dwelling and social life, which only in some areas took on a fully ‘domestic’ character. Hayden is right to emphasise that “the structures in the British Isles were not simply copies of continental prototypes” (2006a, 57), but the widely-held desire to seek a ‘continental tradition’ from which they derived perhaps misses the point. It is becoming increasingly apparent that however extensively the idea of a rectangular durable timber ‘house’ might have been disseminated, this seems to have been interpreted differently from one area to the next, translated into new forms for a range of purposes and even reinvented on several occasions with only the vaguest reference to precursors, whether real or imaginary. In this view, the search for discrete supra-regional building traditions and ‘diffusions’ of architectural styles or technologies may be especially unrewarding: the point is precisely that such ‘traditions of practice’ were local in character and often short-lived, as exemplified in many ways by the White Horse Stone building and other contemporary structures in southern Britain.

The diversity of these buildings, and recurrent characteristics such as spatial isolation and the absence of evidence for sedentary occupation, should also be understood with respect to much wider cultural and economic changes that took place in Europe during the 5th and 4th millennia BC. This period saw far-reaching transformations in social life marked by the renewed expansion of agriculture into areas previously at the margins of Neolithic farming societies (including Britain), and by the spread across the whole of temperate Europe of new agricultural and other productive technologies such as animal traction, the ard plough, and extensive animal husbandry associated with new and more diverse forms of ‘secondary production’ (as synthesized by Sherratt 1981; 1997, 6–27). These changes, while pervasive, took place at different tempos, in varying combinations and at several geographical scales, involving localised technological adoptions, material exchanges and movements of people. In other words, we can recognise a multiplicity of cultural conjunctures, especially around the fringes of the north-west maritime zone (Kinnes 1982, 1984, 2004; Sherratt 1990, 1995), that articulated newer and older social and economic forms, modes of practice and materiality in unique ways, through dynamic cultural interactions brought about by new, expansive, relatively fluid socio-economic systems and new kinds of exchange and communication. This seems everywhere to have included a high level of

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Figure 3.26 Comparative plans of Middle/Late Neolithic buildings in north-west Europe dating to the 4th millennium BC (the continental examples all have Michelsberg or TRB associations): 1. White Horse Stone, Kent (Hayden 2006a, fig.13); 2. Flögeln, Kr. Cuxhaven, Neidersachsen, Germany (Zimmermann 1979); 3. House B, Goldberg, Neresheim, Baden-Württemberg, Germany (Bersu 1936, abb.4); 4. Herrup cult house, Jutland, Denmark (Larsson 2008, fig.4); 5. Piledal, Skåne, Sweden (Tilley 1996, fig.4.6); 6. Grødbygård House A, Bornholm, Denmark (Nielsen 1999, fig.7a); 7. Limensgård House Y, Bornholm, Denmark (Nielsen 1999, fig.7c)
residential and group mobility, sometimes including forms of ‘migration’.

In areas such as Britain and Ireland, where ‘things Neolithic’ were almost wholly novel, the impact of these interactions appears to have led to radical cultural changes (eg in terms of dietary habits and monument building; J Thomas 2008, 70–4; Schulting 2008). Yet, at the same time, the high degree of mobility, concern with animal behaviours, and the diverse economic regimes in Early Neolithic Britain that combined agrarian farming, animal herding, hunting and wild food gathering, accord closely with many of the characteristics associated with Mesolithic hunter-gatherers (cf. Bradley 2007, 27–38; J Thomas 2007a, 2008; Finlayson and Warren 2010). This may help to explain the integrative nature of the new worlds brought into being in Britain in the early 4th millennium BC. These were forged out of complex exchanges, compromises, and novel articulations of sociality and practise that engaged both those that mainly farmed and those that did not in perhaps equal measure, to the point where such distinctions were eventually no longer prominent in definitions of identity. From this perspective, the conventional dichotomies between hunter-gather/Mesolithic and farmer/Neolithic may be especially unhelpful for understanding cultural change in the late 5th and early 4th millennia BC. Instead, it may be best to focus on the ways in which social tensions and new religious and political agendas were expressed, negotiated and resolved. This is especially significant in relation to the emergence at this time of increasingly overt contrasts between sedentary and mobile forms of residence, between static and fluid socio-economic practices (eg between agrarian farming and transhumant pastoralism), and between ascriptions and constructions of sacred domains (for example, between ‘natural places made sacred’ and built monuments).

This approach may help to account for the changes evident in the character and purpose of durable built places in the landscape, and the significance of these with respect to the wider transformation of society in this period. In particular, the construction of timber long halls such as the White Horse Stone building seems on present evidence to represent a radical new articulation of social relationships at the very beginning of the Neolithic. Whatever the exact purpose of this building (discussed below) it is evident that it represented an entirely novel and surely emblematic statement of enduring presence in the landscape. Whether actually occupied by living people or not, the longhouse-like form of the building is redolent of a sense of dwelling, which—albeit with expressions of permanence—would have provided a primary medium for negotiating concerns about identity and belonging in a changing world (cf. Hodder 1990, 136–40; 1994; J Thomas 1996b, 8–10). The fact that the form of the structure was in a sense ‘foreign’ might well have accommodated exogenous technologies and material kinds in an unthreatening, literally homely manner, while at the same time enabling group expressions of solidarity and belonging in the landscape. The absence of continental material culture from British timber buildings suggests that these were built essentially by and for ‘indigenous’ communities even if incomers were involved in their construction, and as such may have had a role in reaffirming or formulating a ‘primordial’ presence at the heart of ancestral homelands or at especially significant places along ancient pathways.

It is possible to extend this argument still further by considering the end of timber hall construction and use. It is a striking feature of recent appraisals of the dating evidence from rectangular timber buildings (eg J Thomas 2008, 79; Whittle et al. 2011, 840–42, fig. 14.180) and megalithic tombs (Whittle et al. 2007) that the former went out of fashion as the construction of the latter became common, broadly within the period c. 3750–3650 BC (cf. Whittle 2007, 389–90). This shift of emphasis in the nature of monumental architecture has long been recognised at a European scale over the longue durée of the 6th to 4th millennia BC, during which—it is suggested—the beliefs and concerns formerly invested symbolically in ‘houses’ (Hodder 1990, 44–6, 68–70) appear to have been transferred to ‘tombs’ (ibid., 169–74; cf. Bradley 2007, 59–62). At first sight, it would seem that a similar process occurred in Britain over a relatively short temporal scale of a century in the early 4th millennium BC. This may, however, be a misleading imposition of Hodder’s interpretative model on a body of evidence dissimilar in both chronographical scale and cultural context. Indeed, the absence of evidence for everyday inhabitation of British buildings may indicate that these were never dwellings of the living but—amongst other things—already ‘dwellings’ of ancestors or spirits. This would help to explain why timber buildings appear to have given way to tombs. If these structures served similar symbolic purposes, bound up with ideas of identity, place, kinship, the past, the ancestors and the dead, then we may be seeing a process that at one level simply extended and formalised these cultural themes through more durable, substantial architectural forms and spaces, while at the same time rendering them more specifically associated with newly-dead members of society and the conduct of mortuary rites.

**Purpose, practice and meaning: interpreting the Early Neolithic timber buildings**

Interpretations of this kind invite renewed scrutiny of the material evidence from the White Horse Stone and Pilgrim’s Way buildings. Questions concerning the forms, functions and cultural significance of British Early Neolithic timber long halls have generated intense debate and often highly polarised interpretative positions. Central to these arguments, as the previous discussion highlights, is the issue of whether the buildings were ‘domestic’, lived-in structures which can be described as ‘houses’ (Rowley-Conwy 2003), or whether they had one or more ‘non-domestic’ roles ranging from storage facilities to shrines (J Thomas 1996b; 2008, 67–70, 79–80). These interpretations are not by any means exclusive, of
course, as numerous ethnographic examples demonstrate (cf. Bourdieu 1990; H Moore 1986; Parker Pearson and Richards 1994; Hugh-Jones 1995, 1996; Richards 1996a; Waterson 1990), and it is increasingly accepted that prehistoric architecture must be seen as richly ‘meaningful’ at a multiplicity of levels, whether communicated formally through symbolic media or perceived more experientially or emotionally (Parker Pearson and Richards 1994; Bloch 1995b, 1995c). Houses, from this perspective, can be seen as places in which both everyday and special ‘ritual’ activities took place (cf. Gibson 2003), imbued with religious and other kinds of cultural significance that embodied no simple dichotomy between ‘secular’ and ‘sacred’ (cf. Brück 1999a; Bradley 2005, 2007b).

Even so, we must assume that Early Neolithic timber buildings were built by distinct groups of people with particular practical purposes and kinds of signification in mind (whether fully shared or not), and that activities were performed within and around these structures by social groups of particular sizes and compositions. Plainly, to understand individual buildings and the specific roles they were built to address in contemporary cultural landscapes, about which there would have been little ambiguity at the time (however complex those roles may have been), it is important to make sense of their construction and use in terms of deliberate and explicable sets of social actions. At present, however, interpretations of these buildings tend to treat questions of purpose, practice and meaning in an abstract manner, with diverse allusions to ideas such as ‘dwelling’ and permanence (eg Cooney 2000, 67), ‘house societies’ (after Levi Strauss 1983, 163–87; eg Cooney 2003; Bradley 2007b, 349), ‘communality’ and social solidarity (Cross 2003), ancestors and mortuary rites (J Thomas 1996b, 10; Brophy 2007), house biographies and body symbolism (eg Bradley 2007b), and ‘great houses’ and communal gathering places (Bradley 2005, 65–78; J Thomas 2008, 79). These overlapping characterisations may well touch on some of the qualities and kinds of meanings that were attached to these buildings, but they also seem largely detached from particular forms of social agency: people, acting purposefully, in real social situations, in ways that produced, inhabited and gave meaning to these built structures, seem to be absent.

The fundamental problem with pursuing more precise or definitive interpretations of the purposes and meanings of these buildings is, of course, an empirical one. The absence of surviving floor layers, and the thin and ambiguous nature of the artefactual and other material evidence, severely limit the potential for both functional and spatial analyses. The White Horse Stone building exemplifies this condition of the evidence perhaps even more forcibly than other examples because of the relatively good preservation of the structure sealed beneath later
colluvial deposits. Even in this case, in such favourable circumstances, it is impossible to identify specific kinds of activity or ‘activity areas’ with any confidence. The lack of material deposits can itself be explained in many different ways, largely in the light of a *priori* assumptions about whether the building was essentially ‘domestic’ or essentially ‘non-domestic’ (Fig. 3.27). Alternative interpretative scenarios include the following:

1. The building was routinely and perhaps continuously inhabited as a well-maintained ‘house’, involving regular clearance of domestic refuse which was moved to middens elsewhere leaving only tiny fragments to be incorporated in posthole fills.

2. The building was inhabited episodically, perhaps for only short periods (eg as part of a seasonally-organised residential system) giving rise to low levels of material deposition which may also have been cleared periodically.

3. The building was not intended for everyday inhabitation, but occupied only on special occasions (eg as a cult-house) by particular social groups participating in ceremonial or other events that took place within the structure, or at other locales in the landscape around, thus giving rise to little material deposition.

4. The building was not used for residential purposes at all, but rather as a ‘hall’ to which people came for special gatherings such as marriages, death rituals or political assemblies, with episodic deposition of placed objects and/or debris scatters that were cleared between events.

5. The building served a religious purpose as a shrine at which ritualised acts of destruction, fragmentation and consumption took place, giving rise to material residues that were removed after each ritual performance or periodically cleared.

6. The building was not used for residential purposes or formal social gatherings but as a storehouse or repository for ‘housing’ valued objects, materials and substances that were periodically displayed, out-exchanged or consumed, leaving little material trace within the structure.

On present evidence it is not only possible to argue the case for all of these interpretations, but also to imagine various combinations of them, whether as multiple contemporary functions (including non-separation of domestic/non-domestic activities), sequences of distinct modes of use over yearly cycles, or more general changes of use over more extended periods of time. There is certainly no lack of ethnographic and historical comparanda to support all manner of interpretative analogies (eg long houses, chiefly halls, cult houses, shrines, tithe barns and churches, etc.). At the same time, there is nothing about the nature of the materials deposited that supports one kind of activity over another: the same bowl could be used for daily use as much as ritualised consumption; the same flint flake could be broken or chipped in the course of a domestic task or during a ceremony, the same joint of meat could be eaten as part of a communal feast or as part of a family meal; and milk could be perceived as daily sustenance or as a central symbol of fertility and reproduction (and, of course, both of these things). Attempts to contextualise the evidence from Early Neolithic timber buildings with respect to their landscape settings (environment, buildings and monuments nearby, and wider patterns of deposition) encounter similar problems of limited empirical data, lack of chronological resolution and interpretative ambiguity. Although the landscape context of the White Horse Stone and Pilgrim’s Way sites, discussed in more detail below, is revealing in the sense that it highlights potential relationships between the timber buildings and stone- and earth-built monumental structures nearby, the nature of these relationships is open to many alternative interpretations.

It is symptomatic of the wider contrasts and contradictions inherent in present interpretations of Early Neolithic rectangular post-built timber buildings that Hayden (who synthesised the evidence for the site report: 2006a) and the present author should arrive at different conclusions. Hayden proposes that the finds at White Horse Stone suggest a domestic function and relatively intense and/or long occupation (although he also observes that: “the finds themselves are insufficient to show whether it is appropriate to interpret the structure as domestic or as having had a more specialised role”; ibid., 64). The present author, in contrast, is extremely doubtful that the finds can be taken to suggest either intensive or long-term everyday use, especially given the apparent longevity of the building as a maintained structure over 300–350 years (Whittle et al. 2011, 380), and because of its architectural design and landscape situation, which are difficult to account for in any conventional ‘domestic’ sense. Instead, it seems necessary to imagine less routine and perhaps more complex and diverse activities. This evaluation of the White Horse Stone and Pilgrim’s Way evidence is based on the following observations:

1. The monumental character and scale of these timber structures, and the extreme rarity of buildings of this kind throughout Britain (cf. J Thomas 2008, 69–70), sets them apart from what appears to be the usual material ‘signature’ of occupation sites of this period, marked by pit groups and occasional stake- and postholes indicative of insubstantial and short-lived dwellings (cf. Bradley 2007, 44, fig. 2.5; Garrow et al. 2005).

2. The timber buildings at these sites have some features in common with the wooden structures found in pre-mound construction contexts at some long barrow sites, most notably at Nuthane, Hampshire (Morgan 1959; cf. Barrett 1988, 36–7), and the post-built long enclosure structures in Scotland (J Thomas 2006), in both cases pointing to ceremonial performance and specific kinds of ritualised actions guided spatially by monumental timber architecture.

3. The deliberate alignment of the southern unit of the White Horse Stone building on the Pilgrim’s Way
structure suggests a desire to articulate the building with the wider cultural landscape and significant places within it, in a way similar to the alignment of long mounds at Thickthorn Down, Dorset (Barrett et al. 1991, 50–1) and the long mounds and long enclosures at Giant's Hills, Skendleby, Lincolnshire (Field 2006, fig. 52).

4. The location of the White Horse Stone and Pilgrim's Way buildings amongst a (probably later) group of megalithic structures (discussed further below), may suggest that their meanings—evoked in the course of activities inside them and in relation to their wider cultural landscape setting—had significance that extended well beyond introspective 'domestic' spheres of practice.

5. The locations selected for the construction of these buildings are very surprising if the intention was to use them as everyday dwellings: in both cases they are positioned on awkward slopes at locales that are at least 400m from the nearest known water sources.

6. The pre-building features and long-lived character of the White Horse Stone building, which may have encompassed two constructional phases, together with the limited evidence for material deposits (some of which may in any case pre-date or post-date building use), suggest an extended period of activity marked by low-intensity or episodic depositional practices. The absence of definite evidence for contemporary hearths or significant quantities of fire residues, especially charcoal but also burnt flint and bone, further suggests a lack of sustained occupation.

7. The current chronology for Early Neolithic rectangular post-built structures places them at the very beginning of the insular Neolithic, c 4050–3700 BC, in many cases pre-dating tomb and long mound construction. In this social and economic milieu these buildings—exemplified by the White Horse Stone and Pilgrim's Way structures—appear to have been architecturally innovative, built on an unprecedented scale, and to have had a striking presence in the cultural landscape, quite unlike that of 'ordinary' occupation sites.

The Early Neolithic timber halls at White Horse Stone and Pilgrim's Way thus appear to have been special places serving special needs, possibly occupied recurrently but not inhabited in a routine 'domestic' sense. This view is broadly consistent with the wider range of recent interpretations of this kind of monumental timber architecture in southern Britain and beyond (eg Bradley 2005, 41–80; 2007, 38–46; Brophy 2007, 89–94; Cross 2003; J Thomas 1996b; 2007, 434; 2008, 69–70, 79). This appreciation of the evidence can be extended further by reconsidering the spatial organisation and geographical settings of the timber halls, and their significance in the cultural landscapes of the early 4th millennium BC. The evidence from White Horse Stone/Pilgrim's Way provides some important new insights in this respect, both in terms of their spatial positioning and their relationships with contemporary and later monuments.

**Early Neolithic buildings in the landscape**

There are now several Early Neolithic post-built timber long halls that can be placed in their local landscape contexts with some confidence, primarily as a consequence of large-scale developer-funded excavations that have involved extensive topsoil stripping to expose features and deposits over very large areas. These include the sites at White Horse Stone/Pilgrim's Way, Lismore Fields in Derbyshire (Garton 1991; Davies 2009), Yarnton, Oxfordshire (Hey 1997, 2001; Hey and Bell 1997; Hey, in prep.), and Llandegai, Gwynedd (Lynch and Musson 2001; Davies 2006, 47–53). Although different architecturally and possibly later in date, the timber structure and the wider areas excavated at Horton, Berkshire (Alistair Barclay pers. comm.; Wessex Archaeology 2009), also provide useful comparative evidence for landscape organisation in this period.

The timber long halls at all these sites share a number of features in common, both in terms of the spatial positioning of the buildings and their immediate landscape settings. In three cases, there are two Early Neolithic post-built structures located within 450m of each other: the White Horse Stone and Pilgrim's Way buildings are 240m apart; Lismore Fields A and B are about 65m apart; and Llandegai 1 and 2 are 445m apart (Fig. 3.28). The buildings were inter-visible at each of these sites, and in each case one may have been built at a location chosen specifically to allow for spatial referencing and/or a clear view of the other. At White Horse Stone, it is striking that the long axis of the southern half of the building is oriented directly on the Pilgrim’s Way structure to the south-east. At Lismore Fields, the long axis of the eastern half of Building 1, a two-compartment angled (and perhaps two-phase) structure like the White Horse Stone building, is oriented on the north side of Building 2 some 73m to the west. At Llandegai, the hillside location of Building 2 overlooks Building 1 to the north-west, and both have similar south-west/north-east orientations. Although Yarnton appears to be an isolated structure it is worth noting that this is oriented on the west end of a long enclosure some 260m to the east, in Site 5 (Hey, in prep.).

Although it is possible that these spatial relationships are coincidental, and perhaps even products of the particular spatial configurations and extents of the excavated areas created archaeologically, nonetheless they offer the intriguing possibility that these buildings embodied sets of symbolic referents that not only lent special significance to the buildings themselves but also articulated those meanings in a spatially extensive manner, engaging and linking them with other structures, the wider landscape and the cosmos. Moreover, whilst there is no suggestion that a single, coherent symbolic scheme was expressed in timber long hall architecture, it is evident that there are a number of shared building orientations. These do not seem to mark specific celestial events, although it is worth noting the approximate east-west equinocial alignments of the Yarnton and Lismore Fields 2 buildings, and the rough orientation of the southern half of the White Horse Stone structure on southern moonrise at the major
standstill (see Ruggles 1999, 36–7, 57). It is more likely, however, that shared building alignments evoked—in different ways—a range of conceptual/perceptual themes concerned with the same principal seasonal and celestial transitions, similar landscape and skyscape aesthetics, and similar social practices, sensory qualities and bodily dispositions (cf. Bourdieu 1977, 87–95, 143–58).

The extensive areas now investigated around several post-built timber long halls also suggest these buildings had similar kinds of physical and social 'presence' in their immediate landscape settings. It is apparent, in most cases, that they occupied localised clearings in otherwise wooded terrain (Stafford 2006b, 18; Giorgi and Stafford 2006, 17; Edmonds and Seaborne 2001, 48–9; Lynch and Musson 2001, 32; Hey, in prep.; Hey 1997, 106–8), which would have restricted both the visibility of these structures and what could be seen from them. In addition, apart from the existence in some instances of second buildings nearby, these structures appear to have stood in isolation, separated spatially from areas in which activities associated with everyday social and economic routines took place. There is no evidence for midden deposits anywhere close to any of the excavated buildings, Early Neolithic pit deposits are extremely rare, hearths and cooking sites are mostly absent, there are no ditched or fenced enclosures (eg for livestock or fields) associated with them, and even nearby tree-throw holes are largely devoid of artefacts and other cultural

Figure 3.28 Early Neolithic 'paired' buildings: White Horse Stone/Pilgrim's Way, Kent (top); Lismore Fields, Derbyshire (middle); and Llandegai, Gwynedd (bottom). Note the different map scale for Llandegai
materials that could have been contemporary with building use. Instead, the only signs of activity close to the buildings consists of a few isolated or dispersed pits and tree-throw holes at White Horse Stone (discussed above), Yarnton (features 3815; 3884; Hey, in prep.), and Llandegai 1 (Lynch and Musson 2001, 29–30), and some possible (but poorly-dated) short post lines or fences at Lismore Fields (Garton 1991, fig. 2.1) and possibly Yarnton (Hey, in prep.). Taken together, these observations reinforce the view that these structures were not farmhouses occupied on an everyday basis.

Relationships between timber long halls and contemporary and later funerary and ceremonial sites are also revealing. In most cases, it is apparent that post-built rectangular long halls have no close spatial or visual connection with contemporary Early Neolithic funerary monuments. There are no known tombs or mounds of 4th millennium date within 3km of the Lismore Fields, Llandegai, or Yarnton sites. Moreover, viewshed analysis suggests that no deliberate attempts were made to situate funerary monuments in the landscape in such a way that they were inter-visible with the sites of timber buildings (see Davies 2006). In striking contrast, there are now several examples of timber structure being sealed by later tombs: including Gwernvale, Powys (Britnell and Savory 1984, 139–42); Sale’s Lot, Gloucestershire (Darvill 1996, 104, fig. 11.8); and Ascott-under-Wychwood, Oxfordshire (McFadyen et al. 2007, 27–31; Hey with Robinson 2011, 231, fig. 11.10). This raises interesting questions about the location of the White Horse Stone and Pilgrim’s Way structures close to an Early Neolithic megalithic tomb, Kit’s Coty House (see Fig. 3.30), and several more possible megalithic structures forming the eastern group of the ‘Medway megaliths’ (see Ashbee 2000).

The Early Neolithic megalithic structures in the Lower Medway Valley, built of local sarsen stone (Fig. 3.29), represent one of the most important groups of surviving monuments of this period in south-east England, of

Figure 3.29 Early Neolithic timber long halls, megalithic monuments and stone axe finds in the Medway Valley, Kent. HS1 sites: 1. White Horse Stone; 2. Pilgrim’s Way
considerable research significance at both national and European scales. They comprise some well-preserved architectural remains, several damaged and less visible structures, and a number of possible monuments (Holgate 1981; Philp and Dutto 1981; Ashbee 1993, 2000). The monument group to the west of the Medway includes Coldrum, located on the south side of the downland escarpment, and The Chestnuts and Addington sites on the Greensand ridge c 2km to the south. The monument group to the east of the Medway is located below the downland escarpment on the slopes to the south of Blue Bell Hill. The megalithic sites consist of Kit’s Coty House (a sarsen chamber and long mound; Fig. 3.30), Little Kit’s Coty House (a possible collapsed megalithic structure), and Smythe’s megalith (a stone-built chamber, now destroyed). Other possible fragments of megalithic structures such as the Coffin Stone, Upper White Horse Stone and Lower White Horse Stone (the latter destroyed in the 19th century) are far more doubtful (Evans 1950, 65–9; Ashbee 1993, 86–9). Only the Upper and Lower White Horse Stones and Smythe’s megalith could have been inter-visible with the White Horse Stone and Pilgrim’s Way timber buildings (Davies 2006, 60). The presence of a large causewayed enclosure at Burham, close to the Medway c 2.5km to the north-west of Kit’s Coty House (Oswald et al. 2001, 63, figs 4.12, 5.20, app.44), further emphasises the significance of this area in the Early Neolithic.

Unfortunately, except for Coldrum (see Whittle et al. 2011, 381–3; Wysocki et al. in prep.), there is no reliable dating evidence from these sites, which is especially problematic given the claims made about the very early date of at least some of the Medway megaliths (eg Ashbee 1998; 1999). The evidence relating to tomb use and mortuary practices is also very limited, again except in the case of Coldrum (Ashbee 1998; Whittle et al. 2011, 381–3.). Reports of other possible sarsen structures in this area (eg Philp and Dutto 1981, 11; site 10) have not been substantiated, while the groups of natural or re-deposited sarsen stones recorded around Cobham and Tottington are unlikely to be the remnants of prehistoric monuments (Ashbee 2000). This view is reinforced by the natural concentrations of sarsen boulders found at Tollgate during work on the HS1 scheme (Bull 2006b). However, the natural occurrence of massive stones in the chalkland landscape, probably originally as ‘sarsen fields’ similar to those that survive on the Marlborough Downs in Wiltshire, may in the Neolithic have given the area a distinctive character that was perceived as ‘special’ and perhaps significant in religious terms.

The spatial relationship between the White Horse Stone and Pilgrim’s Way long halls and the megalithic monuments nearby is relevant to a range of interpretative debates concerning monument groups and settlement in this period. Contrasts have often been drawn, for example, between ‘secular’ landscapes of settlement and farming and ‘sacred’ landscapes of ceremony, monumentality and cosmography (cf. Bradley 2000; Field 2004; Parker Pearson and Ramilisonina 1998; Richards 1996b; Richards and Parker Pearson 1994; Tilley 1994). There is also a persistent interpretative division between those who see monument groups and settlement areas as being more or less co-extensive, and those who see them as being largely separate. Even where there is agreement that occupation sites existed within or around monument groups, it is far less clear whether inhabitation was continuous or discontinuous, how it was organised spatially and temporally, and whether it differed from occupation sites in areas without monuments. At first sight, the White Horse Stone/Pilgrim’s Way buildings seem to side-step these debates, not only because it is far from certain that they were inhabited structures at all, but also because it is likely that post-built timber long
halls generally pre-date funerary monuments (Whittle et al. 2007). However, the very early 4th millennium BC radiocarbon dating of some of the human bone from the mortuary deposits excavated at Coldrum (Whittle et al. 2011, 381–3), suggests a chronological overlap in the construction and use of timber buildings and tombs in the Medway landscape. Plainly, there is an urgent need to recover reliable dating evidence from all of the Medway megalithic monuments in order to determine chronological and thus cultural relationships more precisely.

Funerary monuments have long been central to interpretations of Early Neolithic society in Britain (cf. Bradley 1984, 1998a, 2004; Darvill 2004; J Thomas 1999). The spatial distribution of tombs and long mounds, for example, has sometimes been seen as a reflection of social organisation, with tombs occupying central locations within agricultural territories (eg Renfrew 1976; Bradley 1984), although the aggregation of the Medway sites in two groups does not sit easily with this model (Holgate 1981, 230). Similarly, larger-scale ‘patterned’ distributions of tombs, long mounds, causewayed enclosures and flint mines in regions such as Sussex and Wessex, have been interpreted as reflections of coherent cultural systems (eg Drewett et al. 1988, fig. 2.9). The evidence for complex mortuary practices at tombs and long mound sites, involving body disarticulation, movement of bones and collective deposits of human remains (cf. Darvill 2004; J Thomas 1999, 2000), has been widely interpreted in terms of practices that transformed the dead into ‘ancestors’ and their installation in tombs as the central symbolic foci of living social groups (ie as ‘houses for the ancestors’; Bradley 1984; Barrett 1988). The Medway tombs are thus likely to have been focal elements in a landscape in which the ancestral dead had a special and pervasive presence.

In this light, it is striking that both groups of megalithic monuments in the Medway Valley occupy similar ‘liminal’ locations between the chalk escarpment on one side and the floodplains and terraces of the river Medway and its tributaries on the other, and—at a larger spatial scale—between the chalk downs to the north and the clay vales and High Weald sandstone ridges to the south. This may relate to very large-scale cosmographic structuring of the Early Neolithic landscape (cf. Darvill 1997; Field 1998, 2004): the tombs marking places of transition not only in themselves (from the living to the dead) but also in their positions on a dramatic topographic and geo-environmental boundary. They stand betwixt and between parts of the landscape with contrasting physical and sensory qualities, easily translated into series of classificatory or symbolic oppositions which could have been evoked at many levels of meaning, not least in the course of passages (transitions) between them. The occurrence of sarsen stones, protruding in strange jumbled masses from the soil in the combs and along the slopes of the chalk escarpment, may have further provided this liminal zone with an especially other-worldly character. The clustering of monuments, in this context, suggests the creation of focal areas along this boundary for the articulation of physical, visual and symbolic inter-relationships, forging a powerful sense of coherence and significance displayed in massive, durable stone and earth structures (cf. Bradley 1993; 1998a, 119–31; J Thomas 1999, 45–61).

The presence of the White Horse Stone and Pilgrim’s Way buildings within one of these monument groups, amidst the sarsen fields at the base of the chalk escarpment and within 100m of the cluster of sarsens in the valley bottom, seems more than fortuitous. At the very least, the existence of ancient timber buildings, still standing when the first tombs were constructed, would have provided a human time-depth and resonant historical, biographical and spiritual meanings to set alongside the mythical temporalities and narratives embodied in the sarsen stones nearby. From this perspective, irrespective of their original purpose and use, the timber buildings may represent one episode in the longer-term formation of a sacralised landscape that encompassed the translation of the living into the dead, the transformation of a social present into an ancestral past, and the incorporation of sarsen stones—redolent of other times and places—in structures built to ‘house’ the ancestral dead and their spirits.

Changing the world: first farmers and the Early Neolithic of south-east England

The White Horse Stone long hall and the creation of farming communities

The origins of the earliest Neolithic communities in Britain and the manner by which they came into being continue to be some of the most compelling and challenging interpretative problems in British prehistory. The contrasting and sometimes contradictory explanatory frameworks that guide current debates, mentioned in the previous sections, in most respects have persisted in similar guises for 20 years or more, and may well continue to do so for some time to come. At the present time, the principal interpretative fissure lines, more nuanced and qualified than before perhaps but still capable of generating heated argument, lie along the boundaries of exogenous versus endogenous processes of change (the old colonisation versus acculturation question), ‘westerners’ versus ‘easterners’ as the sources of insular adoptions/colonisations and influences, sedentism versus residential mobility as the prevailing mode of settlement organisation, and of course agrarian versus non-agrarian subsistence and all this implies. As the preceding discussion of long house architecture, social activity and cultural landscapes have demonstrated, it is possible to arrive at a multiplicity of alternative interpretations of both specific aspects of the evidence and wider social and cultural processes during the late 5th and 4th millennia BC. Although many interpreters have sought recently—with these kinds of observations in mind—to integrate the different strands of evidence available in sophisticated models of cultural diversity and social and economic complexity (eg Bayliss, et al. 2008; Bradley 2007, 2008; Sheridan 2007, 2010; Thomas 2007a, 2008; Whittle
certain interpretative positions on either side of those fissure lines are inevitably favoured over others. The latest, hugely significant contribution to this field of study is the comprehensive analysis of British and Irish Early Neolithic chronology by Whittle et al. (2011). Although this focuses on the radiocarbon dating of causewayed enclosures and related sites, it includes in-depth surveys of the dating evidence available for all contemporary classes of site, material culture categories and kinds of social practice of the late 5th and 4th millennia BC in southern Britain and Ireland. The critical application of Bayesian modelling throughout the entire study, as a means of evaluating sets of radiocarbon dates and above all to narrow appreciably and fix more precisely in time the age ranges for each category of evidence, has produced an extraordinarily detailed high-resolution chronological framework for the insular Early Neolithic. The interpretative implications of this work, and the debates that ensue, will take many years to be played out or re-worked (and in some aspects modified as new evidence becomes available), but the overall narrative of Neolithicisation presented immediately establishes a new explanatory model based on multiple high-quality data sets, in relation to which all other interpretative arguments can be judged. In particular, it is argued that there was a geographically-expansive process of Neolithicisation across Britain, starting in south-east England around 4050 BC, perhaps initially in the Thames estuary zone, extending to Wessex, the Cotswolds the east Midlands and East Anglia by 3900 BC, reaching south-west and northern England, southern and eastern Scotland and possibly Ireland by 3800, and finally north-west Scotland, Wales and Ireland fully by 3700 BC (ibid., 863, fig. 15.8). Although the earliest origins of things Neolithic in the south-east is, in fact, based essentially on just four sets of radiocarbon dates, from the Sussex flint mines (ibid., 255–62), the Blackwall single grave (ibid., 361–4), the Coldrum skeletal material (ibid., 381–4), and White Horse Stone long hall (ibid., 378–81), nonetheless the consistently early dates for these sites cannot be matched by other sets of dates of similar age in other regions. In this context, the White Horse Stone long hall evidence clearly represents a key element in an emergent narrative of Neolithic beginnings in Britain that places south-east England centre-stage.

This new narrative challenges the strongly-held view amongst some prehistorians that primary Neolithicisation followed a western British and Irish axis of maritime interaction (Sheridan 2010). Whereas the Whittle et al. model (2011, 853–61) looks to north-eastern France, the Low Countries and northern Germany for the immediate source areas of influence in the development of the first insular farming communities in south-east England, the alternative ‘western’ model seeks origins in western and northern France, transmitted over seaways across the western Channel and the Irish Sea (Garrow and Sturt 2010; Sheridan 2003, 2010; Tresset 2003). There is no question, however, that the compelling case Whittle et al. make for the geographical primacy of the south-east, in adopting and disseminating Neolithic lifeways and material culture, redirects attention to the near-continental areas across the southern North Sea and eastern Channel to identify their points of origin. Yet specific source communities for British Early Neolithic material culture repertoires (both ceramic and lithic) and architectural forms are almost as obscure now as they were when Whittle reviewed the continental background of the earlier Neolithic of southern England 35 years ago (Whittle 2007). Despite the recognition of affinities for Carinated Bowl pottery in Michelsberg ceramic traditions (Sheridan 2007), and the presence of artefact assemblages in Flanders that partially resemble those found in British contexts (Whittle et al. 2011, 859), no sign of a single ‘ancestral homeland’ for the initial south-east English Neolithic is to be found anywhere.

This seems paradoxical if a process of colonisation rather than acculturation is proposed to account for the inception of the Neolithic in Britain. The idea of acculturation, of complex modes of indigenous experimentation and selective adoption of agricultural and other technologies, clearly remains a powerful way to account for the distinctive insular character of the British Early Neolithic, the continuity of aspects of hunter-gatherer life and the absence of evidence for transmission of ‘whole’ assemblages of continental cultural material through ‘folk migration’ (Thomas 2007; 2008). Even so, the acculturation hypothesis struggles to explain the radical and dramatic character of the innovations that occurred within a short time-frame in southern Britain in the period c 4050–3900 BC (Whittle et al. 2011, 852–3, 864–6). Moreover, the early geographical focus in south-east England points to a specific directional cross-Channel process of cultural transference that argues against a model of generalised synchronous transformation by culturally-diverse indigenous communities alone (ibid.).

The idea of colonisation to explain some aspects of the origins of the British Neolithic, in combination with indigenous adoptions of farming technologies, has seen a qualified revival in recent years (eg Bradley 2007, 86) and is favoured by Whittle et al. (2011, 852). Although the specific modes and social conditions of such colonisation, if such indeed took place, are as difficult to identify materially as all other aspects of the Mesolithic-Neolithic transition, Whittle et al. (858–61) argue convincingly that if it did occur it most likely took the form of small-scale, planned, long-distance migration to well-scouted destinations by narrowly-defined kin groups living in geographically restricted home territories. The motives for such ventures, involving high-risk journeys into foreign lands, and land-take amongst pre-existing, potentially hostile native populations (though integration and mutual advantage are equally possible outcomes), must have related to expectations of economic advantage, greater security, achievement of positions of dominance and/or political success, as well as realisations of cultural and religious ideals (Neolithic versions of ‘manifest destiny’ perhaps).

The specific cultural values and socio-economic circumstances that might have stimulated migration of these kinds into Britain are unknown, although the
dynamic and unstable conditions of agricultural expansion and social change evident in Michelsberg regions in the late 5th and early 4th millennia BC suggests a common backdrop to Neolithicisation and other changes more widely in northern Europe at this time (Whittle et al. 2011, 860–1). This might well account for the broadly contemporaneous character of the major cultural transformations that took place around the margins of the Michelsberg zone in south Scandinavia, north Germany and southern Britain. In the British context, this may not have involved significant long-term patterns of migration involving large numbers of people, but rather the movement and settlement of small ‘founder’ groups over one or two generations, with unforeseen longer-term effects through fusion with indigenous populations and the wider adoption of new Neolithic ways of life (ibid.). From this perspective, the likelihood of small-scale localised colonisation events, the lack of evidence for wholesale transmission of total cultural repertoires and sustained cross-Channel interactions, as well as the evidence for significant indigenous contributions to the construction of distinctively insular Neolithic societies, can all be accommodated within the single interpretative narrative proposed by Whittle et al. (ibid.).

Whether this account of the origins of the British Neolithic is correct or not, the White Horse Stone long hall surely provides a window on the very earliest British Neolithic if not the ‘pioneering’ phase itself. As the earlier interpretation of the building emphasises, however, a simple ‘domestic’ function is doubtful and there is absolutely nothing in the artefactual record or architectural design that hints at specific continental cultural origins or inspirations. At first sight, the geographical location of the long halls at White Horse Stone/Pilgrim’s Way is also not the most obvious primary target area for incoming farming communities, situated about 25km inland along the meandering Medway river from the modern estuary and—given the likely extent of sea-level rise—more than twice that distance from the coast in the late 5th millennium BC. Whilst it is certainly possible that adventurous scouting parties could have penetrated deep into the interior along the river valleys of southern Britain at this time, their desire to do so is difficult to account for unless there was a deliberate intention to avoid or by-pass coastal areas and their hinterlands, probably occupied by denser populations of native hunter-gatherers. It is possible, of course, that initial colonisation events took place along the coastlands, followed only later by secondary inland migration by already ‘successful’ farming communities (comprising descendents of both foreign settlers and native inhabitants), though environmental conditions along the coasts (discussed below) are perhaps more likely to have deterred agricultural settlement in the maritime zone.

Whether we should imagine migrants direct from continental Europe following scouts or local guides, or groups budding off from already established coastal agricultural communities, subsequent movements of settler groups and their land-taking activities upstream along the Medway Valley would certainly have been highly visible and—unless negotiated with indigenous communities—potentially highly dangerous. If these kinds of colonisation events did take place, their success would probably have depended heavily on peaceful management and mitigation strategies, engaging both newcomers and natives in mutually-acceptable arrangements concerning areas of inhabitation, routes through existing territories, rights over significant places, access to woodland resources and water sources and so forth, as well as new articulations of authority and status satisfactory to both sides. Indeed it is difficult to imagine this process talking place at all without positive advantages and benefits being perceived by the hunter-gatherer groups involved. Even the alternative scenario of local hunter-gatherer communities adopting farming technologies and associated material culture, marking out a new kind of presence in the landscape through built structures, would have demanded radical changes in social relationships, residence patterns and rights to resources, and their acceptance by the wider kin and corporate groups affected.

From this perspective, the absence of evidence for Late Mesolithic activity at White Horse Stone/Pilgrim’s Way may be consistent with the selection by farming groups (whether incomers or not) of a site for building construction that impacted only minimally on pre-existing patterns of hunter-gatherer inhabitation and resource procurement. This locale is far from the coastal zone and some distance from the Greensand Ridge to the south; areas where hunter-gatherer populations may have been especially concentrated. It is also set back from the River Medway, probably the most intensively used transit route between the coastlands and the interior, while situated on a dry valley route linking the chalk downlands (the landscape zone least intensively exploited by existing hunter-gatherers) with the Medway Valley. The lack of any evidence to support the idea that a significant prehistoric east-west route existed at the foot of the escarpment, prefiguring the medieval Pilgrim’s Way, further emphasises the marginality of the landscape setting. Wherever the builders of the White Horse Stone and Pilgrim’s Way long hall came from, and whatever their ancestry, they chose what appears to have been a secluded and remote place of little or no prior social significance for the construction of their timber buildings. This is consistent with the idea of a deliberate ‘new start’, involving the self-conscious creation of a new kind of world in a place suitably without history or ties of social memory, more or less hidden from external scrutiny. At the same time, this location may well have been endowed with cosmological significance and a sense of other-worldliness, as discussed previously, bound up with its liminal position in relation to the lie of the land and patterns of inhabitation, and the presence of ‘strange’ sarsen rock outcrops scattered across the valley floor.

Whether ‘houses’ of some kind (real and/or imagined) or structures that protected valued people, materials or substances, they seem designed purposefully to convey a powerful sense of ‘difference’ by virtue of their unprece-
Chapter 3  Early prehistory

Regional perspectives on the Early Neolithic evidence

We now know a great deal more about the origins and character of Early Neolithic cultural worlds in south-east England, to a large extent as a consequence of the HS1 work and especially the chronological analyses undertaken by Whittle et al. (2011). It is apparent, however, that there are several major areas of uncertainty when we try to evaluate the significance of the evidence from the HS1 sites and how representative these are of Early Neolithic inhabitation of the landscape at a regional scale (see Figs 3.10 and 3.11).

First, it is uncertain how Early Neolithic activity on the northern fringes of the Greensand ridge, which comprises the greater part of the central and eastern parts of the HS1 Section 1 route, relates to the activity below the chalk escarpment at White Horse Stone and on the Downs to the north, or how far this can be usefully compared with the evidence for activity on the northern fringes of the chalk traversed by the western part of the HS1 corridor. Although artefacts of this period have been found right across the North Downs and north Kent plain, the number of finds remains low and these are thinly scattered. This may, in part, reflect the widespread presence of modern woodlands and pasture across the western parts of the downland escarpment and adjacent areas to the north, as well as historically low levels of systematic surface artefact collection in Kent as a whole. It is remarkable that apart from the programme of work in advance of HS1 construction between the Medway and the Ebbsfleet, there have been no large-scale fieldwalking surveys on the Kent Downs, nor any county-level synthesis of known lithic finds (in marked contrast to the situation in Sussex: eg Drewett 1982a; Garwood 1984; J. Gardiner 1984). Moreover, except for excavations along the westernmost portion of HS1 Section 1 and the A2 corridor just to the north, and on the Isle of Thanet at the east end of the county, there have been no large-scale developer-funded excavations on the Kent chalklands. Research-led fieldwork projects concerned with early prehistoric landscapes in Kent have been entirely lacking, even around known monument groups, until very recently (Garwood, in prep. a).

Whilst Early Neolithic finds from both surface collection and excavation were extremely scarce along the HS1 and A2 corridors (P Harding 2006, 4–6, 322–46, tbls.1–4; figs 2, 3, 13–15; Barclay and Edwards 2006, 24–7, tbl.2.4; Lis Dyson pers. comm.), again suggesting a general low level of occupation, this need not necessarily be representative of occupation or activity on the chalklands generally. Recent discoveries of enclosures and definite or possible long enclosure and mound sites in east Kent, and the evidence for Early Neolithic activity in deeply-buried sub-colluvial contexts in chalkland valleys, notably at White Horse Stone, together suggest there is great potential for significant new appreciations of the inhabitation and monumentalisation of these parts of the Early Neolithic landscape in the future.

Second, the extent and character of Neolithic activity in the Weald, including the Gault Clay vale that lies mainly to the north of the HS1 corridor, and the Greensand ridge and the alluvial plain of the Beult and East Stour rivers to the south, are little understood. A notable feature of regional distribution maps is the virtual absence of Early Neolithic sites and finds from the Weald (M Gardiner 1990). Although the HS1 fieldwalking and site data (eg from Eyhorne Street, Sandway Road and Beechbrook Wood) can now be
added to records of surface finds of arrowheads, stone and flint axe heads (some probably deposited deliberately), and occasional flint scatters suggesting occupation sites (cf. Drewett et al. 1988, 46–7; M. Gardiner 1990, 42; Healy 2008, 11–13), this evidence offers only tantalising glimpses of small parts of the Wealden landscape. Indeed, the non-presence of Early Neolithic activity may be just as revealing, especially the extremely low levels of lithic finds recovery from surface contexts between Ashford and Saltwood (P. Harding 2006), and the complete absence of features and deposits from the sites excavated along this part of the route, including Mersham (Helm 2006), Bower Road (Diez 2006b), Little Stock Farm (Ritchie 2006), and Westenhanger (Gollop 2006). We are left with the persistent general impression of low-density occupation and low-intensity resource procurement, together with occasional ‘special’ deposits.

Third, the previous regional research emphasis on upland chalkland areas with surviving monuments and large lithic artefact concentrations, especially the Sussex Downs, has biased our overall appreciation of the overall distribution and density of Early Neolithic settlement. The uneven character of previous fieldwork is perhaps most marked in relation to river valleys, where there is increasing evidence for occupation in settings now covered by alluvial deposits (eg T. Allen et al. 2004; Hey 1997; Jackson 2007; Knight and Howard 2004; Needham and Trott 1987). This has significant implications for a general re-evaluation of the wider social geography of Early Neolithic inhabitation, perhaps especially the initial phase of colonisation and agricultural innovations represented so far only at White Horse Stone. Unfortunately, very few riverine sites have been investigated in Kent and only in the Ebbsfleet Valley is there any detailed evidence relating to Neolithic activity. Early excavations (Burchell and Piggott 1939, Sieveking 1960) and the recent series of investigations at Springhead and Northfleet in advance of HS1 Section 2 and the STDR4 road scheme (Liz Stafford, pers. comm.), indicate episodic occupation on the sides and floor of what was a deep-cut valley during the 4th millennium BC. The extent, intensity and character of this activity remain uncertain but there is certainly no evidence in the course of the late 5th and early 4th millennia BC (Liz Stafford, pers. comm.), may be unrepresentative of river valley settlement in general and especially the inland parts of the larger river systems and their wider floodplains and terraces.

At present, therefore, the potential of river valley sites remains largely unexplored in south-east England and it is impossible to judge the extent or character of settlement with any confidence, although there is enough (ambiguous) evidence to suggest extensive exploitation of riverine environments and adjacent terraces as well as the possibility of sustained occupation at some locales. From this perspective, the HS1 corridor, which largely bypasses the North Downs (except on the northern edge of the chalkland plateau between Strood and Springhead) and bisects only small sections of the major Kent river valleys, might well have missed areas where settlement was densest in this period and instead traversed some of the more marginal parts of the Early Neolithic landscape.

Fourth, the far-reaching impact of sea-level change on Late Mesolithic and Early Neolithic coastal environments and settlement along the north and east Kent littorals remains largely unknown. This must fundamentally affect wider interpretations of cultural geography based on terrestrial sites and finds distributions, including the HS1 evidence. At present, although there have been general studies of sea-level change during the Holocene (eg Devoy 1982; Long et al. 2000; Shennan and Horton 2002; Shennan et al. 2006), and one attempt to model the changing configuration of prehistoric land surfaces along the North Kent Coast (Wessex Archaeology 2000), the morphologies of ancient coastlines, tempos of landscape change and the environmental character of the landscapes now beneath the North Sea and English Channel are not well-understood (Bates and Whittaker 2004, 50–1). Even less is known about local environmental histories, including the ways in which the major river systems of south-east England were affected by sea-level changes, although this is beginning to change in the light of landscape-scale studies of areas such as Langstone Harbour (Allen and Gardiner 2000), Romney Marsh (Long et al. 1998; Long et al. (eds) 2002; Waller 1994), the east Kent fens (Long 1992), the Ebbsfleet valley (Stafford forthcoming) and the Lower Thames Valley and Thames estuary (Bates and Whittaker 2004; Bates forthcoming).

These studies reveal a general process that saw Late Mesolithic coastal landscapes (of the early 5th millennium BC), lying mainly at -14m to -12m OD, rapidly submerged by continuing sea-level rise. By c. 4000 BC the coast in most areas lay at -7m to -5m OD (M. Allen et al. 2008, 277; Champion 2007c, 70–1; Shennan and Horton 2002). This led to the backing up of rivers and influxes of estuarine waters into lower river valleys, with minerogenic sedimentation and salt marsh and reed swamp formation. From about 4300 BC and especially after 4000 BC, however, the rate of sea-level rise slowed and in some areas there was relative sea-level fall, leading to widespread organic sedimentation and peat formation in alder carr and brackish marshland situations (Bates and Whittaker 2004). It was in this environmental context that initial colonisation events by Early Neolithic farmers and/or indigenous acculturation episodes took place from around 4050 BC (Whittle et al. 2011). It is possible that the presence of extensive coastal marshlands and wide intertidal zones at this time discouraged both cultural contacts and primary settlement in coastal zones by intrusive farming groups. Instead, such interaction and possible colonisation may have been channelled into river valleys in the interior, in landscape settings with more direct access to fresh water sources, viable agricultural land and more comfortable inhabitation areas. This might in part explain the very early presence of Neolithic communities in the
Medway Valley to the south of the chalklands (at Coldrum and White Horse Stone), an area which at this time was probably upstream of the high water tidal range.

The wider Early Neolithic settlement pattern, however, is extremely difficult to reconstruct as so little is known about the real configuration of the coastline, how this varied geographically or how coastal zones were inhabited and used either by hunter-gatherers or farmers. There is no question that extensive low-lying coastal plains extended for between three and ten kilometres to the north of the present Kent coast, especially to the north and east of Sheppey, with wide inter-tidal zones and prominent sandbanks beyond (Wessex Archaeology 2000, 27–8, 44–5, fig. 6). The only detailed site-based assessment of the coastal environment in north Kent is based on the evidence from the Kingsborough Farm enclosures on Sheppey (M Allen et al. 2008), and relates to the later part of the Early Neolithic, several centuries after the first farming communities were established. The immediate hilltop setting of the enclosures, which had been open grassland for some time before the first enclosure was built early in the 37th century BC, was surrounded by an undulating plain dominated by open grassland with localised shrub woodland, fringed by salt marshes along the coast (ibid, 278–9). The nature of this landscape, however, remains difficult to characterise from the limited evidence available and it is possible that there was considerable environmental and settlement variation at both macro- and micro-scales. The evidence from the Blackwater estuary, for example, suggests a far more wooded landscape, with small clearings and widespread occupation, bordered by extensive tidal flats and gravel and sand ridges along the coast. It is indeed possible that the lower-lying areas around Sheppey, by the mid-4th millennium BC, consisted mostly of marshes interspersed with low grassland ridges and hills. The nature of settlement in this area is unknown but it is apparent that continuing sea level changes would have had the most extreme impact on these low-lying areas, including occasional catastrophic flood events, which may well have discouraged sustained settlement except on the most elevated and drier land.

More gradual sea level rise over the 4th to 2nd millennia BC led to inland expansion of the wetland front, with coastlines reaching -3m to -2.5m OD by 1500 BC. Local marine incursions after 2000 BC and more general sea level rises from about 1200 BC resulted in widespread marine sedimentation and erosion of coastal and riverine peatlands, with further major changes to ancient coastlines during the late 2nd and 1st millennia BC. By the 2nd millennium BC, almost all of the former coastal plains had either been inundated or had developed into saltmarshes and Sheppey itself had become an island (Wessex Archaeology 2000, fig. 7).

It is thus very difficult to evaluate the HS1 evidence in relation to wider patterns of landscape organisation, settlement and economic practices. Whilst coastal plain populations may have been considerable, perhaps based economically on intensive pastoral exploitation of a grassland landscape, as well as marine, freshwater and terrestrial hunting and gathering, it is equally possible that wetlands and wooded areas predominated on the lower ground, and that more seasonal and dispersed occupation prevailed in conditions that were unstable environmentally, with coastal erosion and frequent marine inundations and river flood events. What is clear, however, is that our interpretation of the White Horse Stone and Pilgrim’s Way buildings, and the relatively low levels of sites and artefacts along most other parts of the HS1 route, must recognise the potential scale and character of Early Neolithic occupation in now-submerged coastal areas and in sub-alluvial contexts in river valleys.

Finally, it is noteworthy that the development of monument groups in the region during the 4th millennium BC, and the relationships between them, are poorly understood and much in need of comparative landscape-scale studies. The general impression is one of diversity and contrasts rather than any kind of consistent pattern, though this is based on very little detailed evidence. The monument clusters in the Medway Valley are different from one another, and both differ from the ‘group’ of monuments in the Stour Valley, which in fact consists of three widely dispersed earthen long mounds occupying diverse landscape positions (Fig. 3.31). Julliberries Grave is situated on a low ridge on the east side of the Stour where the narrow river valley cuts through the chalk downs; the mound at Boughton Aluph is on the edge of the chalk escarpment to the west of the Stour with wide vistas overlooking the clay vales and sandstone hills to the south; whilst the Elmsstead mound is situated on the chalk uplands to the north of the downhill ridge and overlooks a northwards-running dry valley (Parfitt 1998). The Stour monuments thus appear quite unlike the closer groupings of Medway sites and rather more similar to the earthen long mounds of the South Downs, both in architectural terms and their dispersed distribution. In addition, the presence of the huge causewayed enclosure at Burham in the Medway Valley is not matched by any enclosure sites in the Stour. Although these patterns may change as a consequence of future fieldwork, there is the sense that the monumental architecture and landscape organisations of the two areas were profoundly different.

It is also notable that there is no evidence for sustained Early Neolithic inhabitation or long-lived settlement from the Stour Valley section of the HS1 route to the north of Ashford or from the Greensand ridge to west and east. The small number of pit deposits and redeposited artefacts at Tutt Hill (Brady 2006b) and Beechbrook Wood (Brady 2006a), discussed above, and surface scatters of lithic artefacts from this part of the HS1 corridor (P Harding 2006), suggest episodic, short-lived and dispersed occupation events of uncertain character. This picture is reinforced by the low levels of datable surface finds recovered from this area in the past (M Gardiner 1990, 42–3), with few leaf-shaped arrowheads or flint and stone axe heads (Woodcock et al. 1988), and by the lack of evidence for Early Neolithic activity from the extensive development sites excavated around Ashford recently, such as Westhawk Farm and Bisley Farm (Lamdin-Whymark 2008b; Lis Dyson pers.
This again contrasts with the Medway where there is significant evidence for both Late Mesolithic and Early Neolithic activity on the Greensand ridge at Addington to the west of the river (Alexander 1961). Overall, therefore, current evidence suggests significant contrasts in the landscape histories of the Medway and Stour valleys during the Early Neolithic, and especially differences in the way that the Medway seems to have been a more important focus for monument construction from an unusually early stage in the 4th millennium BC (cf. Whittle et al. 2011, 381–3, 872).

Later Neolithic and Chalcolithic settlement and everyday practices

The later Neolithic and Chalcolithic in southern Britain: interpretative approaches

It is common to distinguish the Middle Neolithic (c 3500–3000 BC) and Late Neolithic (c 3000–2500 BC) from the Early Neolithic in terms of new artefact types, the appearance of new monument forms, and the development of ceremonial centres. The Middle Neolithic is associated, in particular, with cursus monuments (Barclay and Harding (eds) 1999; Loveday 2006) and Peterborough Ware ceramics (Gibson and Kinnes 1997), and the Late Neolithic with henge monuments, stone circles and avenues, timber circles (Gibson 1998; J Harding 2003), palisade enclosures (Whittle 1997b, 139–70; Gibson 2002) and Grooved Ware ceramics (Cleal and MacSween (eds) 1999). In social terms, these periods are still widely seen to mark the transition from minimally ranked societies to chiefdoms (Renfrew 1973) or ‘prestige goods systems’ (Braithwaite 1984), although models of increasing social complexity of this kind have been widely questioned (eg Shennan 1982; Barrett 1994).

The period 2500–2150 BC, marked by the appearance of copper and bronze metalwork, Beaker single graves and increasing numbers of round barrows, once seen as emblematic of the ‘Bronze Age’, alongside continued use of henges, stone and timber circles and Grooved Ware, traditionally regarded as archetypal features of the Late Neolithic, is especially difficult to characterise and prone
to terminological confusion, being variously described as ‘Late Neolithic’, ‘Final Neolithic’ and ‘Early Bronze Age’. The recent revival of the term ‘Chalcolithic’ to encompass this period is perhaps welcome because it creates a sense of cultural distinctiveness and identifies interpretative agenda that are not predetermined simply by reference to the preceding and succeeding periods. It is important to recognise, however, that the duration and character of the cultural phenomena that characterise this ‘period’ appear to vary regionally and in south-east England, where there is relatively little evidence for early copper metallurgy or early Beaker graves, may have persisted for no more than one to two centuries (Alistair Barclay pers. comm.).

In this wider context, ‘ceremonial centres’ and ‘sacred landscapes’ have attracted special research attention, focussed on cosmographic schemes (eg Bradley 1998a, 116–31; Darvill 1997a; Field 2004, Parker Pearson and Ramilisonina 1998; J Thomas 1999, 163–8) and the phenomenology of architectural forms and landscapes (eg Tilley 1994; 2004). Whilst there is agreement that settlements existed within and around such monument groups, the scale and duration of inhabitation sites are generally uncertain and there appear to be considerable contrasts spatially and temporarily from one monumentalised landscape to another in terms of the separation/integration of ceremonial, funerary and occupation areas. These contrasts may be far less pronounced, however, if landscapes are studied at a larger scale: changes in the nature and intensity of activity at one monument group often appear to be complemented by changes at others nearby, suggesting that ‘separate’ monument groups and settlement foci were in fact interrelated within far more extensive cultural landscapes (Garwood 1999a, 292–98; J Thomas 1999, 195; cf. Whittle 1997a).

At first sight, the evidence from the HS1 route and south-east England more widely appears to have little direct relevance to these interpretative themes. Middle and Late Neolithic enclosures and related monuments were not encountered along the HS1 corridor and are almost entirely absent from the region, which has no known cursus monuments, while pit circles and ‘hengiform’ sites are extremely rare, with examples only at Lavant in West Sussex and possibly on Thanet. Large henge enclosures and palisaded enclosures appear to be absent altogether, and the only definite henge monument is the small single-entrance enclosure at Ringlemere in east Kent (Parfitt 2006b). The very limited evidence for large-scale monument construction in south-east England, and the apparent lack of ‘ceremonial centres’, clearly raises questions about the regional character of social organisation, especially if the scale and complexity of monument building is seen as an index of relative social complexity or hierarchy. However, as the relatively recent discovery of causewayed enclosures in Kent demonstrates (Oswald et al. 2001, 81, 84–5), the lack of Middle and Late Neolithic monuments may be more apparent than real.

The other main sources of evidence for Middle and Late Neolithic social life in southern Britain are flint scatters, pit deposits and a few houses. These are subject to interpretative debates similar to those that pervade Early Neolithic studies. There are still divisions, for example, between those that emphasise short-lived occupation and residential mobility (eg J Thomas 1996b; Pollard 1999, 2000) and those that emphasise agricultural intensification and a greater degree of sedentism (eg Darvill 1996, Gibson 2003). These differences are partly paralleled by divergent emphases on symbolic or practical aspects of deposition at occupation sites (cf. J Thomas 1996b, 1999, 64–88; Gibson 2003). These contrasting perspectives have tended to polarise interpretative approaches and clearly over-simplify divisions between things sacred and secular (Bradley 2005; Brück 1999a). Equally problematic are site- and context-type classifications that have encouraged narrow analytical and interpretative frameworks. For example, pits have usually been treated as an isolatable category, the nature and purpose of which remained more or less consistent throughout the 4th and 3rd millennia BC, rather than as just one dimension of cultural practices that encompassed a diverse range of activities and meanings that changed over time (as noted by Pollard 2001, 2004; cf. J Thomas 1999, 69–72). Although there is now a great deal of evidence relating to small-scale everyday activities, both ‘domestic’ and ‘ritual’ in character, especially from pit contexts, the great scarcity and poor survival of domestic architecture and surface layers, the truncation of pit group sites, and the rarity of precise radiocarbon dates usually leaves interpretation of both built structures and pits ambiguous at best.

It is unsurprising, in this light, that very little is known about the character of Middle and Late Neolithic and Chalcolithic settlements and everyday practices in southern Britain. The outstanding evidence from recent excavations at Durrington Walls provides significant new insights into the spatial organisation of settlement architecture and social practices, and the temporal rhythms and durations of occupation episodes (Parker Pearson 2007; J Thomas 2007b), but there is very little to compare this with and the possibility remains that the settlement is in many respects unusual. More widely, despite increasingly confident identification of pits as remnant features belonging to occupation sites, with more critical appreciation of the complexities of the evidence (eg J Harding 2006; Lamdin-Whymark 2008, 100–33), an understanding of the specific purpose of pits and their spatial and practical relationship to houses and other built structures remains elusive.

Recent reviews of the evidence at both regional and county scales (Drewett et al. 1988, 66–8, 71–7; Champion 2007c; Garwood, in prep. b), syntheses and gazetteers of particular material culture types (notably Grooved Ware: Wainwright and Longworth 1971; Longworth and Cleal 1999), and publications of recent field project results and finds (eg in Cotton and Field (eds) 2004), have shown that south-east England is still relatively lacking in Middle and Late Neolithic pit deposits and settlement evidence. This may now be changing, however, as a consequence of new discoveries of Grooved Ware at sites such as Betchworth, Surrey (D Williams 2004), Westhampnett in West Sussex (Chadwick...
Middle Neolithic pits and material culture

Middle Neolithic pottery was recovered from eight HS1 Section 1 sites: Cobham, White Horse Stone, Pilgrims Way, Eyhorne Street, Sandway Road, Tutt Hill, Little Stock Farm, and Saltwood Tunnel (Barclay et al. 2006, 26–7). In most cases this material was redeposited in later features, such as the fills of three of the ring ditches at Tutt Hill (Brady 2006b, 9–11), while the fragmentary and worn Peterborough Ware sherds found at Sandway Road had probably been discarded on the surface (Barclay et al. 2006, 19; contra Trevarthen 2006, 12).

Only at two sites were Peterborough Ware assemblages found in pit contexts: at Little Stock Farm (Pits 2507, 2214; Ritchie 2006, 5), and at Pilgrim’s Way (Pits 711, 714), at the north end of the probable Early Neolithic rectangular timber building Structure 972 (Hayden 2006a, 67–9). Each assemblage consisted of just a few sherds associated with flint artefacts and small quantities of charred plant remains. Even so, the Middle Neolithic evidence recovered from these pits and other contexts along the HS1 route is important regionally, adding significantly to the total number of Peterborough Ware finds in south-east England.

At Little Stock Farm, a large shallow kidney-shaped hollow (2214) described as a pit in the excavation report (Ritchie 2006, 5) but possibly a tree-throw hole, contained a small amount of pottery and an end scraper. Some 5m away, a much smaller, shallow bowl-shaped pit (2507) produced Fentgate style Peterborough Ware sherds together with a small flintwork assemblage including a *petit tranchet* arrowhead (Fig. 3.32). Charred plant remains in both features included cereal grains and hazelnuts, one of which from Pit 2507 produced a radiocarbon date of 3350–3030 cal BC (NZA-19918).

At Pilgrim’s Way, two small groups of shallow features, one at the northern end of Structure 972 and another some 16m to the west, included pits containing Peterborough Ware pottery. The group at the north end of Structure 972 comprised four circular round-based pits, two of which contained pottery including a base sherd from Pit 711 that could be refitted with body sherds from Pit 714, forming part of a Mortlake Ware bowl with unusual base decoration consisting of concentric circles (Fig. 3.33). The large size and relatively unweathered condition of the bowl

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**Figure 3.32** Little Stock Farm: Middle Neolithic features: site plan, Pit 2507 section, and artefacts from Pit 2507. Pottery: P30 and P33; Peterborough Ware (Fentgate style) rim sherds from bowl vessels. Flint: petit tranchet arrowhead
Figure 3.33 Pilgrim's Way Middle Neolithic pits (see also Fig. 3.22): site plan, sections of Pits 711 and 714, and ceramic and lithic finds. Pottery: P6; Peterborough Ware, Mortlake style bowl; base from Pit 711 refitting with body sherds from Pit 714. Flint: petit tranchet arrowhead from Pit 711.
sherd s suggest that they were deposited in the two pits at about the same time and probably soon after breakage. There were few other associated artefacts in these features, though Pit 711 also contained a petit tranchet arrowhead, which may indicate a purposeful depositional event. The two pits to the west were similar in size to those near Structure 972 but only one contained finds (Pit 716: five small sherd s of Peterborough Ware). In every case, the pits containing Peterborough Ware had single fills, and there is no evidence that they were weathered prior to infill ing. This may suggest that they were backfilled very quickly after they were dug, or alternatively that they were protected by covers or were located within roofed structures (discussed in more detail below in relation to Grooved Ware pits). Either way, in common with most Peterborough Ware pits excavated in southern Britain, these seem to have been deliberately filled with homogenous deposits containing cultural materials.

It is tempting to interpret this practice as an act of 'closure' at the end of a period of inhabitation (cf. Pollard 2001, 323), or as votive action of some kind, though there is no agreement about the extent to which Middle Neolithic artefacts and other materials were specially selected for deposition (suggested for Peterborough Ware pits in the Middle Thames valley: T Allen et al. 2004, 91–2; Lamdin-Whymark 2008, 109, 123), or simply incorporated in redeposited midden material (suggested for pits in East Anglia: Garwood 2007b, 14). There is, however, a general perception of increasing formality and care in material selection and deposition during the late 4th and early 3rd millennia BC, accompanied by more conscious spatial location of pits with reference to cultural features in the landscape (J Thomas 1999, 70–3). It is possible at Pilgrims Way, for example, that the decayed remnants of Structure 972 would have been visible for some time after the building was abandoned and that the Middle Neolithic pit group at the north end was positioned deliberately to refer to this ancient (perhaps 'ancestral') material presence (cf. Bradley 1998a, 44–5).

The sparse occurrence of Middle Neolithic evidence on HS1 sites, especially the small quantities of artefacts and low levels of burnt materials in pit deposits, appear to indicate either small-scale/short-term occupation episodes, careful spatial separation of settlement activities and residues from pit contexts, and/or occasional visits to significant locales for non-domestic purposes. More generally, it is apparent that Middle Neolithic pits and other deposits are rare throughout the wider region, even in landscape contexts where settlement activity was probably concentrated, such as river valleys. Such apparent low levels of activity should, however, be treated with caution. Pit deposition may well have been subject to a range of proscriptions and spatial controls, as in the case of animal bone excluded from Peterborough Ware pit deposits in north Yorkshire (J Harding 2006, 123) and the Lower Thames Valley (Cotton 2004, tbl.15.1). Furthermore, evidence for Middle Neolithic activity in south-east England derives from a very diverse range of contexts, including buried soils (eg at Baston Manor, Kent; Philp 1973, 4–20), probable midden deposits (eg at Ebbsfleet, Kent: Burchell and Piggott 1939), ploughsoils and truncated subsoil layers (eg at Bullock Down, East Sussex; Drewett 1982a, 47–57), secondary deposits in causewayed enclosure ditches (eg at Whitehawk and Combe Hill in East Sussex; Drewett et al. 1988, 66–8), and a small number of pits, such as examples at Selmeston, East Sussex (Drewett 1975), Chalk Hill pit 12, Ramsagate, Kent (Hearne et al. 1995, 261, 283–6), and several sites in the Lower Thames Valley (Cotton 2004, tbl.15.1). In this light, it may be misleading to assume that pits were necessary components of Middle Neolithic settlement sites, or that pit deposition had consistent and exclusive significance (cf. J. Harding 2006; Garwood 2007b, 12–14). The shared empirical characteristics of pits, and some common technologies and representational repertoires evident in their creation, use and closure, may in fact disguise a wide range of practical intentions, use-histories and meanings depending on the particular social contexts and agents involved. At the same time, pit deposition was plainly just one means of managing cultural materials and embedding them in the ground, perhaps used especially where there was a special need to mark significant inhabitation events or practices (eg rites of passage of various kinds; cf. Garwood 2011) in an ‘earth-fast’ manner.

Late Neolithic pits and material culture

The evidence for Late Neolithic activity along the HS1 route in some respects closely resembles the Middle Neolithic pattern, especially in terms of the general rarity of sites and finds of this period and the prominence of pit deposits. Only two HS1 Section 1 sites produced significant Grooved Ware assemblages, White Horse Stone/Pilgrim’s Way (Hayden 2006a) and Eyhorne Street (Hayden 2006b), in both cases primarily from pit contexts. A few additional sherd s of Grooved Ware were found redeposited in later contexts at Sandway Road, Mersham and Saltwood (Barclay et al. 2006, tbl. 2.4). There is no question that the relatively large assemblages of Grooved Ware from White Horse Stone/Pilgrim’s Way (475 sherd s; 2033g) and Eyhorne Street (33 sherd s; 210g), totalling 508 sherd s weighing 2243g, represent valuable additions to the regional corpus, second only to Ringlemere in east Kent (where over 5000 sherd s have been recovered: Parfitt 2006a; Varndell 2006). The Grooved Ware assemblage from White Horse Stone/Pilgrim’s Way was dominated by relatively earlier Clacton style material, with characteristic straight-sided tub-shaped vessels, while pottery from Eyhorne Street, Sandway Road and Saltwood Tunnel has Durrington Walls style features, with more rounded vessel forms, though Clacton style attributes such as horizontal banded decoration were also present (Barclay et al. 2006, 27; cf. Garwood 1999b). A distinctive feature of the Late Neolithic features at both White Horse Stone/Pilgrim’s Way and Eyhorne Street is their spatial clustering in more or less discrete groups, with evidence for contemporaneous activity at each locale rather than series of events widely separated in time. This suggests the presence of
distinct ‘activity areas’, and the occurrence of spatially- and temporally-circumscribed occupation episodes.

At Eyhorne Street, Grooved Ware was found in two adjacent pits (19 and 21) (Fig. 3.34). Pit 21 contained a small finds assemblage consisting of 11 Grooved Ware sherds and six worn flint artefacts, some burnt. The pottery has a grog-tempered fabric similar to that of sherds found in Pit 19, including some that may have belonged to the same tall straight-sided jar (P6). Pit 19 contained a larger group of finds, including 22 sherds of

Figure 3.34  Eyhorne Street Late Neolithic pits: site plan, pit sections, and ceramic finds from Pit 19. (Lower left) Grooved Ware pottery: P2, rim sherds of a Durrington Walls style vessel; P3, finely-decorated rim and body sherds, including a ‘Greek key’ motif; P5, rim sherds of a Durrington Walls style vessel; P6, rim and body sherds with horizontal grooved lines and finger-nail decoration. (Lower right) Spherical fired clay object with incised decoration.
Figure 3.35 White Horse Stone/Pilgrim’s Way: Late Neolithic structures, pits, hollows and tree-throw holes. Contours show modern surface topography
Grooved Ware from at least five vessels, with elements of both Durrington Walls and Clacton styles, some with charred residues coating their outer surfaces. Some of this material, from one of the sherds of jar P6, was radiocarbon dated to 2880–2500 cal BC (NZA-20418). The pottery also includes a decorated sherd with an unusual ‘Greek key’ motif set within a herringbone panel (P3), a close parallel for which is the design scratched on one of the chalk plaques from Amesbury (Barclay et al. 2006, 18; P Harding 1988, fig. 2).

Pit 19 also contained fired clay fragments, burnt flints, 19 flint flakes, most of which were burnt and some broken, and a charred crab apple which produced a radiocarbon date of 2840–2460 cal BC (NZA-20417). Most intriguing of all is a fragment from a small rounded clay artefact with incised decoration (Fig. 3.34; Edwards and Fell 2006). The original form and purpose of this unique object are uncertain although it was possibly spherical (c. 27mm diameter), perhaps with a perforation. This may have been a decorated lug or boss from a vessel, a large bead or spindlewhorl, or a clay version of a Late Neolithic decorated stone ball (Barclay et al. 2006, 28-9; Edwards and Fell 2006). Although there are no direct parallels, it is notable that a complete fired clay ball has been found recently in a pit containing Grooved Ware at Horton, Middlesex (Alistair Barclay, pers. comm.). Both Pits 19 and 21 appear to have been infilled deliberately at about the same time with homogenous soil deposits. The presence of finely-decorated Grooved Ware and the decorated clay object certainly suggest purposeful deposits of selected materials and objects, though there is no indication of formal spatial arrangement of specific items.

### Late Neolithic settlement at White Horse Stone/Pilgrim’s Way

The Late Neolithic activity at White Horse Stone/Pilgrim’s Way, far more considerable than that at Eyhorne Street, offers an exceptional insight into the nature of occupation practices in this period. Extending north-south for a distance of at least 220m, from Pit 7000 to the north of the Early Neolithic timber hall, to tree-throw 861 in the south-west part of the Pilgrim’s Way excavation area, were 24 Late Neolithic pits and several tree-throws or ‘hollows’ containing Grooved Ware or other material dating to the first half of the 3rd millennium BC (Fig. 3.35). These features form a linear ‘band’ no more than 35m wide running down the valley just above its base on its western flank. There is no evidence for Late Neolithic activity anywhere in the extensive White Horse Stone excavation areas to the north-west and east of this line, nor in the Pilgrim’s Way excavation area to the east. It is likely, therefore, that Late Neolithic activity was organised alongside or parallel with a route way or linear boundary running from the chalk escarpment down to the Medway Valley (see Fig. 3.43 below). It is surely no coincidence that the Roman road which crosses the White Horse Stone/Pilgrim’s Way sites, demarcated by straight parallel ditches some 13m apart (Features 1305/19450), takes almost exactly the same path down the valley (Hayden 2006a, 177–8, fig. 106).

### Pits, other features and depositional practices

The majority of the Late Neolithic features at White Horse Stone/Pilgrim’s Way were spatially concentrated in five main clusters, those to the south being slightly more dispersed than those to the north but in every case within an area no more than 25m across (Fig. 3.36). From north to south these comprised (features which produced samples used for radiocarbon dating are denoted *):

1. Pit Group 19400 (Pits 4874, 4965*, 5265*), Posthole 5008* and Hearth 4830.
2. Pit Group 19399 (Pits 4929, 4943*, 4952), Structures 5297 and 19140, and Tree-throw 5125*.
3. Pit Group 19413 (Pits 4939, 4994*, 5094*), Pit 4937 and Hollow 5072*.
4. Pit Group 19396 (Pits 958*, 962, 964, 966), Pit 968 and Tree-throw 909.
5. Pit Group 19395 (Pits 911*, 913*, 929), Pits 119/872 and 952*, and Tree-throw 861*.

In addition, two isolated features were recorded further to the north, Pits 7000 and 7024 (the latter possibly associated spatially with Pit Group 19400), and a pair of pits (‘Pit Group’ 19397: Pits 898, 904) situated about 30m east of Pit Group 19396.

In each case the clusters identified above consist of a very similar range of features, including: (i) three or four closely-spaced pits, of which at least one was relatively deep with steep sides and a flat base (4965, 5256, 4943, 4994, 958), and another very shallow pit, in some cases with signs of in situ burning or concentrations of burnt stones (4874, 4952, 4939); (ii) a spatially separate shallow pit or hearth (except for cluster 2), often containing burnt materials (4830, 4957, 119/872); and (iii) a ‘tree-throw’ or ‘hollow’ (except for cluster 1, though several undated shallow ‘natural’ features were recorded nearby). In nearly every case the closely-spaced pits within each group were separated at roughly equal distances (c. 0.3–0.7m), the only exception being Pit Group 19395 where the pits were intercut in sequence from north to south (913 – 929 – 911). This suggests that most of the pit groups included features that were in use at the same time, and/or that great care was taken to keep each pit and its contents strictly bounded in relation to others. Analysis of the material contents of the Late Neolithic features suggests further patterns: in particular, although the quantities of some finds categories varied greatly from one cluster of features to another, in every case one of the deeper pits (4965; 4943; 4994; 458; 913) contained relatively larger assemblages of animal bone, flint artefacts and—except in one case—pottery, in comparison with the other pits in the group. It is also evident that the hollows and tree-throws in most cases contained especially large animal bone and flint artefact assemblages (5072, 909, 861). Taken together, this evidence suggests
Figure 3.36  Clusters of Late Neolithic features at White Horse Stone/Pilgrim’s Way (1-5), each comprising three or four closely-spaced pits, a separate shallow pit or hearth (except for Cluster 2, though this also has posthole structures), and a ‘hollow’ or ‘tree-throw’ hole.
the presence of distinct, spatially-separated activity areas some 15–40 m apart, each of which comprised a set of similar features and deposits representing consistent and recurrent sets of practices within each area.

The deposits found within pits and other features were extremely varied in terms of the types, quantities and combinations of materials present (Table 3.2; Fig. 3.37). Charcoal occurred in small quantities everywhere, but burnt flint and sarsen occurred only in a few features and other charred materials were extremely rare, especially cereal grains (only four recovered from Late Neolithic contexts: Hayden 2006a, 84). Animal bone and flintwork was also present in most depositional contexts, though few features stand out in terms of large finds assemblages.

Only seven features contained more than 100 flint artefacts. From north to south these were (the number of flint artefacts is shown in brackets): Pit 5256 (233), Pit 4965 (177), Pit 4943 (119), Tree-throw 5125 (205), Pit 4994 (150), Pit 958 (164), and Tree-throw 909 (105). Especially large animal bone assemblages (over 1000g) were also recovered from six features, most of which were wide, relatively shallow tree-hole hovels and hollows which seem to have been used for middening or waste disposal: Pit 7000 (4568g), Pit 4994 (3562g), Hollow 5073 (1365g), Tree-throw 909 (1420g), Pit 952 (3758g), and Tree-throw 861 (5186g). Ceramic finds, in contrast, were far less common, being present only in about half of the features belonging to this period, only seven of which contained appreciable quantities of pottery (more than 50g: 4874; 4965; 4943; 4994; 958; 898) of mainly Clacton-style vessels (Fig. 3.38). Of these, Pit 4965 was by far the richest with 1079g of pottery (about 270 sherds), the next closest being Pit 4994 (216g) and Pit 958 (126g). Two pits at the south end of the site contained tiny fragments of cremated human bone (913, 952), and it is possible that the larger cremated human bone deposit in Pit 119/872 close by (189g; from an adult) associated with a flat-headed bone pin, is a rare Late Neolithic cremation burial (Hayden 2006a, 75–6, 86). Although the pin could be Roman, the partial nature of the cremation deposit and the lack of Roman material nearby support an earlier prehistoric date.

An initial assessment of finds distributions indicated a general contrast between the White Horse Stone and Pilgrim’s Way excavation areas (Hayden 2006a, 90–3), especially in terms of the forms of features (e.g. the occurrence of flat-bottomed pits), the scale and nature of deposits (e.g. the relative emphases on consumption or redistribution of meat evident in the bone assemblages), and the presence of ‘special’ items such as polished objects and cremated human bone (found only at the southern end of the distribution of Late Neolithic features). This contrast was interpreted in terms of different practices and kinds of signification—perhaps structured oppositions—between domestic activity in the northern part of the site (in the area of the Late Neolithic circular wooden structures; discussed below), and apparently more communal and ritualised activities in the central and southern parts of the site (from Pit Group 19413 southwards). To some extent, however, identification of such patterning stems from use of the arbitrary site boundary between the White Horse Stone and Pilgrim’s Way excavations to define the units of comparison (ibid., 74–81), which produces an artificially exaggerated contrast between northern and southern areas. Closer scrutiny of the evidence, treating both excavations as part of a single site, reveals more of a continuum of variation rather than strict oppositions or exclusive patterning (Table 3.2). Moreover, too little account was taken of site truncation by erosion processes and site excavation methods, which probably explains the decreasing average depth and depositional complexity of the features from north to south across the site, as well as the lower quantities of flint and pottery artefacts in the Pilgrim’s Way features, where truncation was greater than further north and where sieving of fills was carried out less consistently. Interpretations based on selective assessments of aspects of the evidence must also be questionable: for example, the identification of practices involving the redistribution of meat from animal carcasses within the White Horse Stone area was based on the contents of only one feature, Pit 4994.

Overall, therefore, spatial analysis of the contents of Late Neolithic features reveals no definite large-scale or exclusive patterning of different kinds of practices or symbolic oppositions between one part of the site and another. Instead, apart from the two exceptionally finds-rich pits among Pit Groups 14400 (Pit 4965) and 19413 (Pit 4994), perhaps the most striking feature of the finds distributions was the presence of large midden deposits in shallow hollows and tree-hole features close to pit groups (from north to south: Tree-throw 5125, Hollow 5072, Tree-throw 909, Tree-throw 861) and in outlying pits at the northern (Pit 7000) and southern (Pit 952) ends of the Late Neolithic linear distribution of features. It is possible that the cremated human bone deposits, especially in Pit 119/872, and the polished objects found in Pit 911 (ibid., 86), reflect less ‘domestic’ concerns and more conscious symbolic referencing in the depositional acts that took place at the southern end of the site. Some care needs to be exercised, however, in drawing firm conclusions about the overall spatial structuring of practices as nothing is known about Late Neolithic activity outside the excavated zone to the south, nor the extent to which practices in different site areas were contemporary.

Dating evidence in general suggests no significant temporal variation in either the distribution or character of Late Neolithic activity features at White Horse Stone/Pilgrim’s Way. Radiocarbon dates produced from animal bone, antler and short-life charcoal samples (17 dates from 12 contexts, fairly evenly spread across the site) all fall within the period 2930–2460 cal BC, and mostly 2900–2600 cal BC (Hayden 2006a, 93). The calibration curve for this part of the 3rd millennium BC is fairly flat, creating wide age ranges, and it is possible that this consistent series of dates disguises an extended sequence of consecutive occupation events rather than contemporaneous practices or long-term occupation. There is, however, no significant spatial variation across the site in terms of relatively later/earlier dates, and in
Table 3.2 Summary of the artefacts and other materials recovered from the White Horse Stone/Pilgrim’s Way Late Neolithic features, with a list of radiocarbon dates. The features are listed from north to south and grouped with reference to the spatial clusters identified in the text (see Fig. 3.37).

<table>
<thead>
<tr>
<th>Feature</th>
<th>Grooved Ware ceramics (g)</th>
<th>Lithics (no.)</th>
<th>Animal bone (g)</th>
<th>Other</th>
<th>Radiocarbon dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated pits to north of Cluster 1</td>
<td></td>
<td></td>
<td></td>
<td>Burnt flint; charred plant remains (wild plants)</td>
<td></td>
</tr>
<tr>
<td>Pit 7000</td>
<td>1</td>
<td>66</td>
<td>455</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 7024</td>
<td>2</td>
<td>22</td>
<td>19</td>
<td>Charcoal</td>
<td></td>
</tr>
<tr>
<td>Cluster 1 (Pit Group 19400)</td>
<td></td>
<td></td>
<td></td>
<td>Burnt flint; charcoal; charred plant remains (wild plants; hazelnuts; cereals)</td>
<td>Charred hazelnuts: 2910-2670 cal BC</td>
</tr>
<tr>
<td>Pit 5265</td>
<td>98</td>
<td>223</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 4874</td>
<td>178</td>
<td>46</td>
<td>8</td>
<td>Charcoal; charred plant remains (cereals); burnt clay (48g)</td>
<td>Charred grain (residual): 3950-3750 cal BC</td>
</tr>
<tr>
<td>Pit 4965</td>
<td>1079</td>
<td>177</td>
<td>277</td>
<td>Charcoal; charred plant remains (wild plants); burnt quernstone fragment</td>
<td>Cow clacareum: 2920-2660 cal BC</td>
</tr>
<tr>
<td>Posthole 5008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Maloidea charcoal: 2880-2630 cal BC</td>
</tr>
<tr>
<td>Hearth 4830</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Maloidea charcoal (residual): 4050-3810 cal BC</td>
</tr>
<tr>
<td>Cluster 2 (Pit Group 19399)</td>
<td></td>
<td></td>
<td></td>
<td>Charcoal; burnt clay (60g)</td>
<td>Charred hazelnuts: 2880-2620 cal BC</td>
</tr>
<tr>
<td>Pit 4932</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 4943</td>
<td>53</td>
<td>119</td>
<td>12</td>
<td>Charcoal; burnt stone</td>
<td></td>
</tr>
<tr>
<td>Pit 4929</td>
<td>38</td>
<td></td>
<td></td>
<td>Charcoal; charred plant remains (wild plants; cereals)</td>
<td></td>
</tr>
<tr>
<td>Structure 5297</td>
<td>34</td>
<td>62</td>
<td></td>
<td>Charcoal</td>
<td></td>
</tr>
<tr>
<td>Structure 19140</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree-throw 5125</td>
<td>205</td>
<td>108</td>
<td></td>
<td>Burnt flints &amp; stones; charcoal (large amounts); charred plant remains (wild plants)</td>
<td>Cow radius: 2890-2630 cal BC</td>
</tr>
<tr>
<td>Cluster 3 (Pit Group 19413)</td>
<td></td>
<td></td>
<td></td>
<td>Burnt stones; charcoal</td>
<td>Red deer antler: 2920-2690 cal BC</td>
</tr>
<tr>
<td>Pit 5094</td>
<td>48</td>
<td>617</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 4939</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 4994</td>
<td>216</td>
<td>150</td>
<td>3542</td>
<td>Burnt flints (large amounts)</td>
<td>Cattle scapula: 2860-2490 cal BC</td>
</tr>
<tr>
<td>Pit 4937</td>
<td></td>
<td></td>
<td></td>
<td>Burnt flints &amp; stones; charcoal</td>
<td>Cattle skull: 2930-2690 cal BC</td>
</tr>
<tr>
<td>Hollow 5072</td>
<td>12</td>
<td>66</td>
<td>1365</td>
<td>Burnt stones; charcoal</td>
<td>Cattle calcareum: 2890-2620 cal BC</td>
</tr>
<tr>
<td>Cluster 4 (Pit Group 19396)</td>
<td></td>
<td></td>
<td></td>
<td>Charcoal; charred plant remains (cereals)</td>
<td>Pig scapula: 2880-2610 cal BC</td>
</tr>
<tr>
<td>Pit 958</td>
<td>126</td>
<td>150</td>
<td>391</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 964</td>
<td>32</td>
<td>7</td>
<td>44</td>
<td>Aurochs vertebra: 2880-2570 cal BC</td>
<td></td>
</tr>
<tr>
<td>Pit 962</td>
<td>7</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 966</td>
<td>8</td>
<td>13</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 968</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree-throw 909</td>
<td>1</td>
<td>105</td>
<td>1420</td>
<td>Burnt flints; charcoal</td>
<td></td>
</tr>
<tr>
<td>Cluster 5 (Pit Group 19395)</td>
<td></td>
<td></td>
<td></td>
<td>Polished ironstone ball; charred plant remains (wild plants)</td>
<td>Pig mandible: 2870-2490 cal BC</td>
</tr>
<tr>
<td>Pit 911</td>
<td>44</td>
<td>458</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 929</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 913</td>
<td>5</td>
<td>22</td>
<td>85</td>
<td>Cremated human bone (3g)</td>
<td>Cattle phalanx: 2880-2620 cal BC</td>
</tr>
<tr>
<td>Pit 119/872</td>
<td></td>
<td></td>
<td></td>
<td>Cremated human bone (adult; 189g); burnt bone pin; charcoal</td>
<td></td>
</tr>
<tr>
<td>Pit 952</td>
<td>47</td>
<td>3758</td>
<td></td>
<td>Cremated human bone (1g); charcoal</td>
<td>Cattle tibia: 2890-2660 cal BC</td>
</tr>
<tr>
<td>Tree-throw 861</td>
<td>59</td>
<td>5186</td>
<td></td>
<td>Charcoal; charred plant remains (wild plants)</td>
<td></td>
</tr>
<tr>
<td>Isolated pit group 19397 (to east of Cluster 4)</td>
<td></td>
<td></td>
<td></td>
<td>Burnt flints; charcoal; charred plant remains (wild plants)</td>
<td>Pig radius: 2840-2460 cal BC</td>
</tr>
<tr>
<td>Pit 904</td>
<td>33</td>
<td>65</td>
<td>596</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit 898</td>
<td>131</td>
<td>12</td>
<td>28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3.37  Late Neolithic pit groups at White Horse Stone/Pilgrim’s Way: plans, sections and finds assemblages, showing the quantities and relative proportions of ceramics, lithics and animal bones.
Figure 3.38  Grooved Ware pottery (all Clacton style) from White Horse Stone/Pilgrim’s Way pit contexts, showing the range of decorative designs and motifs present. Most of the sherds illustrated are from tub-shaped vessels, except for the base of a bowl from Pit 898 (P17) and fragments of a cup or miniature vessel from Pit 911 (P19).
most cases sets of radiocarbon dates from clusters of features and from spatially-related pit groups give no indication that activities were widely-separated in time. The only apparent exception to this is Pit Group 19413 where the relatively late radiocarbon date from Pit 4994 (NZA-21325: 2860-2490 cal BC) contrasts with the earlier date from Pit 5094 (NZA-22813: 2920-2690 cal BC) and the three dates from Hollow 5072, which all fall within the period 2930-2610 cal BC (NZA-22749; -22750; -22751). This contrast seems less pronounced, however, once the spatial and contextual relationships among these features are taken into account, and may be due more to the imprecision of the calibrated radiocarbon dates. In particular, the equidistant spacing of the three pits arranged in an arc, and the presence in Hollow 5072 of a placed cattle skull that appears to complement the large cattle bone assemblage in Pit 4994 nearby, which lacks skull fragments completely, suggest deliberate inter-referencing and contemporaneous practices. Overall, therefore, it seems likely that activity in each of the clusters of features, especially the pit groups, took place over short periods of time, and that all the Late Neolithic activity at White Horse Stone/Pilgrim's Way, whether continuous or episodic, occurred in a fairly short period perhaps spanning only a few decades.

The significance of Grooved Ware pit deposits has been the subject of much debate in recent years, especially the 'structured' nature of Late Neolithic social practices and the use of pits, depositional acts and artefacts as symbolic media (cf. Barrett et al. 1991, 92–106; Bradley 2000, 117–31; J Harding 2006; Pollard 1995, 2001; J Thomas 1999, 62–8). Central to this theme is the idea of 'structured deposition' first outlined by Richards and Thomas (1984), who argued that ‘ritual’ is equivalent to symbolic communication, expressed in the degree of formality, repetition and symbolic salience of social actions, and thus visible in the degree of spatial patterning or ‘structuring’ of artefacts and other materials (1984, 190–2). This approach has been applied widely in British prehistoric studies, though it is now acknowledged that it is impossible to separate ritual from utilitarian behaviour in any simple way (Bradley 2005; Brück 1999a; J Harding 2006). Meaning is conveyed in all actions, for example, while everyday tasks may be formalised and domestic architecture imbued with religious significance (Bradley 2005). The distinctiveness of ritualised actions may instead lie in the proposition-ality and conscious expression of significant ideas in comparison with the largely uncritical nature of habitual behaviour (Bell 1992; Hill 1995, 99). In material terms, the selection and careful placement of certain material categories in ‘special’ places suggests purposeful and reflective performance of ‘significant’ actions separate from those performed on a day-to-day basis.

Interpreting Late Neolithic depositional practices in these terms is, however, fraught with difficulties, primarily because clear boundaries between these qualities of action are extremely difficult to define, even at a site level, and because the objects and materials deployed in ritualised acts were mostly identical to those used in ordinary domestic and production activities. Indeed, it has been recognised for some time that this correspondence can be deliberate, in the sense that many ritual acts are performed as ritualisations of everyday practices, drawing upon the ‘domestic’ sphere (of reproduction, production, consumption, and sociality) as a rich source of metaphors and symbolic resources for conveying fundamental meanings about the nature of the world (J Thomas 1999, 87; Pollard 2002; Woodward 2002b; 2002c; Bradley 2005). In this light, it is unsurprising that interpretations of Grooved Ware deposition in relation to everyday practices, occupation episodes and settlement are often ambiguous, reflecting a great deal of uncertainty about the nature of Late Neolithic social practices.

In particular, there is a widely-held assumption, which sits uneasily with the prevailing interpretative focus on symbolic and ritual dimensions of deposition, that Grooved Ware deposits in pits and other contexts provide evidence for ‘settlement’ (J Thomas 1999, 64–87; J Harding 2006; Garrow 2007b, 9–11). Pit groups, from this perspective, have been seen as evidence for sustained inhabitation or repeated occupation episodes at favoured locations, to which groups would return on a regular basis as part of a mobile, seasonally-structured residential system that was ‘tethered’ in various ways to ‘fixed’ monuments, fields, transhumance routes and perhaps more permanent abodes (Darvill 1997b; Pollard 1999; 2000).

In some cases, pit groups consist of amorphous clusters of dug features, some intercutting, occasionally also associated with ‘hollows’, hearths, stake holes and/or postholes, for example at Barholm, Lincolnshire (Simpson 1993), Radley, Oxfordshire (Barclay 1999b, 319–20), Firtree Field, Cranborne Chase, Dorset (Barrett et al. 1991, 84), and Ringlemere, Kent (Parfitt 2006a). The majority of pits, however, occur singly or in small groups, especially as ‘paired’ and three-pit arrangements of the kind recorded at White Horse Stone (Fig. 3.39). These spatial patterns are evident at most of the other sites in south-east England where Grooved Ware has been found in pits, including Eyhorne Street, Kent (paired pits; discussed above), Betchworth, Surrey (a three-pit group; Williams 2004) and at Westhampnett, West Sussex (paired pits; Chadwick 2006, 11). Similar groupings are known very widely elsewhere in southern Britain, including the Upper Thames Valley (at sites such as Yarnton Area 7 where 10 of the 19 Late Neolithic pits were arranged in pairs; Hey, in prep.), and in North Yorkshire (eg on Rudston Wold; J Harding 2006, 121). It is also important to note that where extensive excavations have taken place, what might otherwise be seen as ‘isolated’ single pits and pit groups are often found to form parts of much larger dispersed clusters of features that extend for considerable distances across sections of the landscape, for example at Barton Court Farm, Abingdon, Oxfordshire (Miles 1984, 4, fig. 4), Yarnton, Oxfordshire (Hey, in prep.) and Church Lawford, Warwickshire (Palmer 2006; 2007).

The spatial distribution, clustering and arrangement of Grooved Ware pits, and the assumption that they relate in some way to domestic occupation, invites closer scrutiny
of their purpose and the nature of infilling practices. Although the non-utilitarian character of such features has been much-emphasised in recent interpretations, based on evaluations of bowl-shaped earlier Neolithic pits, the lack of weathering or erosion of pit sides, deliberate backfilling practices and the increasingly formal nature of deposition during the later Neolithic (J Thomas 1999, 64–73), there is good reason to question these observations and the conclusions drawn from them. As the White Horse Stone/Pilgrim’s Way pit groups demonstrate, a large proportion of Grooved Ware pits are in fact steep-sided and flat-based rather than bowl-shaped, suggesting that they were intended for some purpose requiring a level ‘floor’. One possible explanation is that they provided a secure setting for flat-based Grooved Ware vessels: each of the flat-based pits at White Horse Stone/Pilgrim’s Way, for example, could have accommodated three to five medium-sized Grooved Ware pots. Indeed, bowl-shaped pits could also have been used to stand containers such as round-based pots, baskets or leather bags in fixed positions. In addition, there is no reason why both flat- and round-based pits could not have been covered by wooden, wicker or fabric lids to prevent unwanted materials (dust, etc.) and animals (rodents and insects) contaminating or destroying the contents, as well as accidental damage by humans.

The possible use of pit covers, as well as the possible location of pits within buildings or shelters might well explain the lack of weathering of pit sides. This calls into question the usual assumption that they must have been backfilled soon after they were dug and hence served no utilitarian purpose. The alternative possibility, that pits were protected and used for long periods before infilling took place, has significant implications for our understanding of the temporalities of pit use, dis-use and structured deposition, as well as the idea that pits were primarily ‘symbolic’ in character. Although a degree of formality in pit-infilling is certainly widely evident, these acts may have taken place only when pits had reached the end of their use-lives, which could well have been extended rather than short. This must cast doubt on the argument that pits were ‘dug to be filled’ (eg J Thomas 1999, 72–3; Bradley 2007, 44), and undermines the idea that their essential purpose was to provide stages for ritualised deposition. Although some pits and pit deposits may well have been fashioned with these intentions, it seems likely that the majority were used practically before such infilling events took place. From this perspective, while Jan Harding’s (2008) recent appraisal of pits and their role within settlement sites rightly emphasises the extended life-histories of pits and their intrinsic significance in relation to everyday practices, it seems misleading to interpret them primarily as media for charting a ‘biography of inhabitation’, denying their practical functions in everyday settlement activities that may have been unrelated to final acts of deposition. The HS1 evidence and the interpretation proposed here accord more closely with Thomas’ view of pit deposition as a means of symbolic ‘closure’ at the end of a period of residence (1999, 70–3).

In this light, the extent to which overt symbolic signalling pervaded Late Neolithic pit deposition (Richards and Thomas 1984; Bradley 2000, 117–31; Pollard 2001, 325–28; Woodward 2002c, 67–9) needs to be re-evaluated, especially once the extreme rarity of highly-structured depositional processes involving the selection of ‘special’ items, careful placement of artefacts and controlled filling sequences is recognised. Previous interpretations have depended on readings of evidence from monuments such as henges and timber circles and a small number of pits with complex, materially-rich and exotic contents (eg the Chalk Plaque Pit, Amesbury, Wiltshire; P Harding 1988). In these cases, the practices giving rise to material deposits do appear to have consisted of highly formalised ceremonial acts involving explicit symbolic representation (J Thomas 1999, 80–5; Pollard 1995; 2001, 325–8). It is likely, however, that these bear only slender relation to the depositional acts in less socially-salient or culturally significant pit contexts elsewhere, except in so far as they mark one extreme end of a continuum of variation in the ritualisation of depositional actions. It is striking that apart from a few unusual, finely worked and/or decorated objects found in three pits, there is very little in the HS1 evidence that would suggest special selection of items for deposition or the ordered
placement of pit contents. Instead, it would seem that pit filling—whilst usually deliberate—was conducted in a fairly simple if controlled fashion, drawing upon materials readily to hand, probably derived from middens nearby that had been created during the preceding period of occupancy or perhaps earlier settlement episodes (cf. J. Thomas 1999, 70–3; Pollard 1999, 89; Garrow 2007b, 12). The extent to which deliberate material selection took place as part of the pit-filling process is arguable, even where some patterning of material assemblages is apparent, because the creation of middens from which fill materials were taken may already have been subject to various kinds of physical structuring and selection criteria, including spatial organisation defined by domestic routines, religious proscriptions that separated categories of material, and/or ritualised depositional activities.

The Late Neolithic buildings

In this wider context, the presence at White Horse Stone of two successive Late Neolithic timber buildings,
Structures 5297 and 19140 (Fig. 3.40), located at the south-east end of the Early Neolithic timber long hall, is not only of exceptional interest in itself but may help to clarify the nature and significance of the clustering and spatial distribution of pits and other features. This has considerable significance for wider interpretations of pit groups as the possible remnants of short-lived settlements with insubstantial domestic architecture, such as tents, stake-built huts and turf- or cob-walled buildings (e.g. J Thomas 1996b; Gibson 2003; J Harding 2006, 121). The White Horse Stone/Pilgrim’s Way evidence thus has a significant contribution to make to interpretations of settlement in this period more generally.

It is evident, however, that the White Horse Stone buildings and associated Pit Group 19399 present a number of interpretative difficulties, mainly because of the lack of stratigraphic relationships and limited dating evidence. It is uncertain, for example, whether Structure 5297 pre-dates Structure 19140 or vice versa, and there is no definitive way to determine whether the pits were located with reference to Structure 5297, were internal features within Structure 19140, or represent an entirely separate phase of activity. Several alternative interpretations concerning the architectural forms and practical purpose and use of the buildings are therefore possible, although the spacing of features and other physical relationships provide some basis for arguing that Structure 19140 was replaced by 5297, and that Pit Group 19399 was associated with the latter.

**Structure 5297**

The most clearly defined structure, 5297, consisted of ten postholes arranged in a sub-circular or slightly ovate shape, with a diameter of 3.1–3.4m (Hayden 2006a, 71–2). The Late Neolithic three-pit group 19399, located on the south side of the structure, formed an arc that broadly followed the curvature of the ring of postholes. It is likely, therefore, that the timber building and the pits were either contemporary or the pits were dug while the remains of the structure were still visible. The form of the building superstructure is uncertain, but it is possible that the postholes held the inner post-ring of a large roofed structure that extended over the pits (as suggested for the Late Neolithic buildings at Trelystan; Gibson 1996), with an overall diameter of perhaps 8–9m (Fig. 3.41). The unweathered nature of the deeper pit sides certainly suggests these were covered in some way. The finds from the postholes, mostly recovered from sieving, were generally small and fragmentary but included a large Grooved Ware sherd (33g) and another very small shell-tempered sherd that is probably also Grooved Ware. The other finds consisted of flint chips...
and flakes, some burnt, though charcoal and other burnt materials were otherwise present in only small quantities and bone was absent entirely. An early to mid-3rd millennium BC date for this building seems highly likely, therefore, based on the direct Grooved Ware pottery association, the spatial relationship with the radiocarbon-dated Grooved Ware Pit Group 19399, and the lack of evidence for later prehistoric activity in this part of the site or nearby.

**Structure 19140**

The other structure, 19140, consisted of two arcs of stake holes that probably formed an ovate structure with a diameter of 3.6–4.0m (Hayden 2006a, 72). Gaps on the west and east sides may be due to localised truncation or destruction when post-structure 5297 was built, though there was no stratigraphic evidence to confirm this or determine the sequence of construction events. Whilst it is possible that Pit Group 19399 was positioned across the central part of the structure, this seems unlikely given the usual peripheral distribution of pits at Late Neolithic house sites (discussed below). Alternatively, it is possible that the arcs of stake holes did not support a roofed structure but formed screens or windbreaks, perhaps around the Late Neolithic pits, though the more likely relationship of the latter with post circle 5297 makes this unlikely. A row of small stake holes (19402), which appears to run in a curving line across the stake circle structure, could represent an internal partition although there are no other features which may indicate functional distinctions between the different spaces on either side. It is also possible that Pit 4929 destroyed the east end of the line of stakes, which—if these supported an internal wall within the stake-built building—may further support the idea that the pit group is later in date than Structure 19140 and more likely to relate to Structure 5297. Although no dating evidence was recovered from the stake holes of either 19140 or 19402 (the only finds being nine flint chips from the ‘partition’ stake holes), the overlapping locations of two circular timber structures, one seemingly replacing the other, suggests a close chronological relationship and probably a Late Neolithic date based on the Grooved Ware found in the postholes of Structure 5297.

**The White Horse Stone buildings: architectural parallels**

There has been very little comparative analysis of Late Neolithic buildings in Britain since Darvill’s survey of the evidence 15 years ago (Darvill 1996). Several important new discoveries since then, however, as well as more general assessments of the nature of Neolithic settlement sites (notably: Pollard 1999, 2000; Gibson 2003; M Allen 2005; Garrow 2007a; Brück 2008), provide a new basis for evaluating the White Horse Stone/Pilgrim’s Way evidence. It is immediately apparent that buildings dating to the 3rd millennium BC are extremely diverse in terms of their sizes, shapes, constructional technologies, internal design features and likely superstructures (see Fig. 3.42). In addition, modes and temporalities of inhabitation seem to be very different from one building to the next. Some broad distinctions can be recognised, however, in the following terms:

1. **Shape**: clear design decisions were involved in choosing circular, oval or rectilinear ground plans, presumably relating to intended function, occupancy, available building materials and stylistic and aesthetic criteria.

2. **Wall and roof architecture**: contrasts can be drawn between buildings with load-bearing internal post- or stake-built structures that supported wider pitched roofs, and buildings with external load-bearing wooden (posts or stakes), turf and/or cob walls, with slightly internal roof supports (if any).

3. **Massiveness and durability**: although there is wide variation, it is evident that some structures were more substantial than others, for example where timber posts form part of the fabric, which may relate to expected length and intensity of inhabitation.

4. **Presence/absence and spatial organisation of internal structures or features**: hearths, partitions, fixed furniture (such as dressers and box beds) and pits.

It is apparent that Structures 5297 and 19140 at White Horse Stone are slightly different in size and layout, and can be contrasted in terms of relative solidity (post-built as opposed to stake-built), but they have similar shapes and it is possible that the two building superstructures were not unlike, both perhaps consisting of internal post-/stake-rings supporting wider pitched roofs (like Trelystan 1 and 2; Gibson 1996). They clearly have almost nothing in common with the few rectangular buildings of this period, such as Willington structures B and E, Derbyshire (Knight and Howard 2004, 66–9; Wheeler 1979), Yarnton Structure 4291, Oxfordshire (Hey, in prep.), and Belle Tout Structure 5 (Bradley 1970, 328–30; 1982). There is also no obvious point of similarity with the elongated C-shaped bedding trench associated with Grooved Ware at Briar Hill, Northamptonshire (Structure 145; Bamford 1985, 44, fig. 22), which forms one part of an alignment of post-built structures and was probably not a dwelling. In contrast to these buildings, the White Horse Stone structures both belong to the broad range of small circular/ovate and rounded square-shaped ‘domestic’ architecture of the 3rd and early 2nd millennia BC.

At first sight, there are a number of possible Late Neolithic, Chalcolithic and Early Bronze Age parallels for Structure 5297 (Fig. 3.42), including Sant-y-Nyll Huts A, B and C, Glamorgan (Peterson 2007, 135–8, fig. 10.6; Savory 1962), Oversley Farm Structure 4, Cheshire (Garner 2007, 37–41), Yarnton buildings 3353 and 3600, Oxfordshire (associated with Biconical Urn pottery; Hey, in prep.), Redgate Hill Structure I, Norfolk (Healy et al. 1993, 23–4, fig. 25), Sutton Hoo building S26, Suffolk (Hummer 2005, 416–20), Belle Tout Structure I, East Sussex (Bradley 1970, 321–3; 1982), and two round buildings with porches at Monkton, Thanet (Structures I and V; Clark and Rady 2008, 12–13; 89–91, fig. 1.18). However, all of these buildings, with the exception of the Monkton structures which are not
well-dated, are probably Chalcolithic or Early Bronze Age on the basis of pottery associations, as well as radiocarbon dates for the buildings at Oversley Farm and Yarnton. Two buildings at Wyke Down, Dorset (Green 2000, 71–6), associated with Grooved Ware pit groups and a fence line, are more similar in scale and date to the White Horse Stone buildings, but are plainly different in design terms with internal four-post roof-support structures surrounded by stake rings. These may be dwellings, although their location adjacent to a small
henge monument, the evenly-spaced linear arrangement of the three structures and shared orientation of entrances suggest these may have served ‘special’ communities and occupation events or were themselves shrines. Other possible Late Neolithic post-built circular dwellings in southern Britain are at best doubtful, such as the hollow associated with postholes at Prospect Park, Harmondsworth, Surrey (Lamdin-Whymark 2008a, 135–6; Andrews 1996, 13, fig. 58). In this light, whilst a Late Neolithic date for Structure 5297 seems well-grounded, exact architectural parallels—in the form of small circular houses with internal post rings dating to the early 3rd millennium BC—are presently lacking.

Comparative analysis of the relationship between pit groups and houses further strengthens the interpretation of Structure 5297 as a Late Neolithic house, particularly the evidence from Trelystan Building B. This was a stake-built structure dating to c 3000–2600 cal BC, with a central rectangular hearth and three pits positioned just within the stake ring (Britnell 1982, 140–3; Gibson 1996). The pit group, although positioned differently in comparison with the pit group outside the post ring of Structure 5297, in other respects has the same attributes, comprising two relatively deep flat-based pits and a third shallow feature with a rounded base, arrayed in an arc that respected the curvature of the stake ring but was not exactly concentric with it. The similarities with the White Horse Stone example are striking. Other Late Neolithic buildings are also associated with pit groups (eg Trelystan A, Upper Ninepence Structures 1 and 2, and Wyke Down Buildings 1 and 2), although their spatial organisation, shapes, sizes and contents are diverse, and the chronological relationships between pits and buildings are often uncertain (eg at Upper Ninepence, Powys; Gibson 1999, 35–46). It is also likely, of course, that some pits were external to buildings, intended for activities that took place in open-air contexts, and there is no question that in some cases pit-digging occurred after buildings were abandoned (eg Durrington Walls House 547; Parker Pearson 2007, 138). Even so, the evidence from White Horse Stone/Pilgrim’s Way and Trelystan, and the wider occurrence of three-pit groups, suggests that some household activities were organised in such a way that repeated associations of pits and buildings were realised in similar spatial patterns.

In some respects, Structure 19140 has closer Late Neolithic parallels than 5297, especially in terms of stake-ring construction and building size (Fig. 3.42). These include Trelystan Buildings A and B, Powys (Britnell 1982, 139–43; Gibson 1996), Upper Ninepence Structure 1 and possibly Structure 2, Powys (Gibson 1999, 29–47), and the numerous houses at Durrington Walls (Parker Pearson 2007). These buildings are associated with Grooved Ware assemblages and are mostly well-dated to the early 3rd millennium BC. Larger circular stake-built structures at Hockwold-cum-Wilton, Norfolk (Bamford 1982, 9–12), Chippenham Barrow 5, Cambridgeshire (Gibson 1980), and Gwithian Structure 1642, Cornwall (recently re-interpreted as a single-phase building: Nowakowski et al. 2007, 25–6; cf. Darvill 1996, 101, figs 6.8.3, 6.10.8; Megaw 1976), are all associated with Beaker pottery and probably date to the late 3rd/early 2nd millennium BC. The apparent partition inside the White Horse Stone stake circle is paralleled by what appear to be internal stake-built walls or other short linear structures within Trelystan A and B (Britnell 1982, figs 3, 4), and possibly Gwithian Structure 1642 (Nowakowski et al. 2007, 25–6). Although direct dating evidence is lacking, the architecture of Structure 19140 thus appears to be broadly consistent with the wider range of stake-built circular and sub-rectangular buildings dating to the early/mid-3rd millennium BC.

**Pit groups and other possible buildings**

The close connection between pit groups and buildings described above suggests that the other Late Neolithic three-pit groups at White Horse Stone/Pilgrim’s Way, each of which was very similar to Pit Group 19399 in terms of scale, curved lay-outs and pit forms, were probably also associated with buildings. Direct evidence for these has not survived, though posthole 5008 close to Pit Group 19400 produced a radiocarbon date of 2880–2580 BC (NZA-21280), and there were several more postholes and other features in the same area which do not obviously form part of the Early Neolithic building design and may be Late Neolithic in date. Shallow features such as stake holes may well have been truncated or were difficult to recognise in the fills of the hollows and tree-throws in this area, while larger postholes have simply been assumed to be Early Neolithic because of the presence of the long hall building. In addition, if a full circle is extrapolated from the 19400 pit arc, it is apparent that Hearth 4830—the fill of which contained a Grooved Ware sherd—was positioned on the south side of this circle (see Fig. 3.41). By analogy with the proposed reconstruction of Building 5297, which would place the pit group inside the roofed structure, both Pit Group 19400 and Hearth 4830 may have been internal elements of a second, contemporary timber building.

The possibility that Late Neolithic features were more widespread in the area of the long hall than originally assumed, and the likely 3rd millennium BC date of stake hole Structure 19140, further invites reassessment of the stake holes at the south-east corner of the Early Neolithic long hall. These may, in fact, be Late Neolithic in date and ‘associated’ with the long hall only by coincidence. It is noticeable that the stake holes are not precisely aligned on the east wall of the long hall, and—rather than being set in a straight line—form a curving arc south-eastwards. One possibility is that they formed part of a fence line similar to those found at other Late Neolithic settlement sites such as Durrington Walls (Parker Pearson 2007, 140, fig. 12.7), Swarkestone (Greenfield 1960b) and possibly Ringlemere (Parfitt 2006a, 9, fig. 6). Viewed together, it is conceivable that the definite and possible Late Neolithic features in the vicinity of the earlier long hall represent a single occupation site with at least two buildings.

The other pit groups to the south were more heavily truncated so that any associated post and stake holes were completely destroyed, but their pit arrangements
and forms suggest they had the same kinds of relationships to built structures as those to the north. The only possible exception to this is the inter-cutting group of pits (19395), which lacked some of the features of the other pit groups (such as a deeper flat-based pit) and which also contained unusual materials including a polished iron pyrite ball and a small amount of cremated human bone. This need not, however, imply complete separation from the domestic sphere: similar inter-cutting pits, for example, were dug into the south-west corner of Durrington Walls House 547 after it was abandoned, one containing a human bone (Parker Pearson 2007, 138, 140). Even as a series of more formal pit-digging and depositional events, it is possible that Pit Group 19395 marks a relationship with a former house.

The Grooved Ware settlement at White Horse Stone in context

The Grooved Ware-associated pits and other Late Neolithic features at White Horse Stone/Pilgrim’s Way thus appear to belong to a lineally ordered settlement that originally comprised several widely spaced occupa-

Figure 3.43 White Horse Stone/Pilgrim’s Way: the north-south linear distribution of Late Neolithic features, including definite and possible house sites, in comparison with the route of the Roman road
tion areas, each probably consisting of one or more buildings, a pit group and a midden. There is also some evidence for a fence line and a hearth in the least-truncated part of the White Horse Stone excavation area close to the sites of the two successive Late Neolithic post-/stake-built houses. These occupation areas were probably sited beside a north-south route that ran down the dry valley towards the River Medway, on a course that was either maintained for millennia or replicated and formalised—on almost exactly the same alignment—by the construction of a road with flanking ditches at some point during the Roman period (Fig. 3.43).

Linear structuring of activity across the landscape has long been recognised in the spatial organisation of Late Neolithic henges and other kinds of monumental architecture, such as the west-east alignment of Maumbury Rings henge, Allington Avenue linear monument, Flagstones enclosure and Mount Pleasant henge enclosure to the south of Dorchester, Dorset (R Smith et al. 1997, 284–7), and the line of henge monuments at Thornborough, North Yorkshire (J Harding 2003, 90–9), but has rarely been noted in non-monumental contexts. This is probably because extensive open-area excavations encompassing sufficiently long sections of such routes to make them identifiable are relatively rare, and because interpretative expectations concerning ‘residential mobility’, small-scale ‘temporary’ inhabitation and fluid forms of land division have distracted prehistorians from the possibility of large-scale landscape organisation of settlement and everyday practices (rather than just ceremonial events and monumental architecture).

This may well change as extensive spatial analyses of pits, middens, houses and other features becomes more common (Fig. 3.44). It is noticeable, for example, that most of the Grooved Ware pits at Redgate Hill, Huntstanton, Norfolk, are positioned in a linear band 20m wide running for at least 120m from north-west to south-east (Healy et al. 1993, fig. 29). The Neolithic ‘holloway' at Oversley Farm, Cheshire, recorded over a distance of at least 120m but probably extending a good deal further, also dates to the mid- to late 3rd millennium BC if not earlier (Garner 2007, 29–41). Two later structures, associated with Beaker ceramics, were built 40m to the east in the period c 2130–1750 BC on a line parallel with the holloway (ibid., fig. 25). It is also possible that the line of Late Neolithic circular buildings and other structures running west-east across the northern half of Durrington Walls (Parker Pearson 2007, fig. 12.2; J Thomas 2007b, 152–56, fig. 13.7) were originally aligned along a pathway. Other possible examples of lineally-organised settlements or occupation areas, traced over shorter distances, include the two Late Neolithic buildings on either side of the pit grave at Trelystan, Powys (Britnell 1982), and the Holywell Combe holloway, midden and stake hole structures at the east end of the HS1 route near Folkestone, Kent (Bennett et al. 1998).

It is apparent that the northernmost clusters of features at White Horse Stone/Pilgrim’s Way were far more closely spaced than the others. If contemporary, these may represent several associated houses and activity areas similar to house clusters and compounds of 3rd millennium BC date elsewhere in southern Britain (Fig. 3.45). Although it is generally impossible to determine specific spatial and functional relationships between different features, or precise chronologies of construction events and occupation practices (with the remarkable exception of Durrington Walls; Parker Pearson 2007), it is apparent in most cases that Late Neolithic, Chalcolithic and Early Bronze Age settlements comprise between one and three buildings, fences (acting as boundaries to separate residential groups and/or demarcate activity areas), and open-air hearths, ‘working hollows’, pits and middens. Buildings were usually closely-spaced, for example at Durrington Walls (ibid.), Upper Ninepence (Gibson 1999, 29–47), Wyke Down (Green 2000, 71–6) and probably Ringlemere, Kent (Parfitt 2006a, fig. 6), though more isolated or dispersed buildings and compounds seem to be evident at Oversley Farm (Garner 2007, 29–41) and Belle Tout (Bradley 1970; 1982, 68–71).

The longevity and frequency of occupation episodes are particularly difficult to establish, although there is almost nothing to suggest continuous long-term (eg multi-generational) periods of residence. Instead, the overriding impression from all these sites, as often observed, is of temporary/short-term occupation episodes lasting a few years or a generation, sometimes structured on a seasonal basis. There is little evidence for earthworks, which might suggest more substantial commitment to creating ‘permanent’ places of settlement in this period, though rare exceptions exist such as the curving ditch at Upper Ninepence (Gibson 1999, 37–41), the Belle Tout enclosures (Bradley 1970, 1982) and the Early Bronze Age ditches and palisades at Sutton Hoo (Hummler 2005). There are also very few instances of apparent reoccupation of settlement locales after periods of abandonment, although the replacement of buildings at sites such as White Horse Stone and Sant-y-Nyll (where Huts B and C were not contemporary with Hut A: Peterson 2007, 135–8, fig. 10.6; Savory 1962), and the occurrence of especially dense concentrations of inter-cutting features, at Ringlemere for instance (Parfitt 2006b), may indicate more intensive, sustained and/or repeated occupation episodes.

It is important, in interpreting these ‘occupation sites’, to recognise that they must have formed part of more extensive settlements and associated areas of land use, our understanding of which is extremely limited. There is sufficient evidence, however, to suggest considerable complexity and variety in the social and economic landscapes of the Late Neolithic, with extensive spatial organisations of people and practices similar to and often integrated with ‘ceremonial landscapes’. At Durrington Walls, for example, a dense aggregation of tens if not hundreds of houses may once have existed on the slopes of Durrington combe at its junction with the Avon valley, possibly extending across the whole area occupied by the later henge enclosure (Parker Pearson 2007; J Thomas...
Linear arrangements of houses, house clusters and compounds located beside routes or land boundaries is suggested by the evidence from White Horse Stone/Pilgrim’s Way, Redgate Hill, Oversely Farm, and possibly Durrington Walls. The presence of ‘holloways’ dating to the 3rd millennium BC at Oversley Farm, Cheshire (Garner 2007, 29–41) and Holywell Combe, Kent (Bennett et al. 1998), fencelines at an increasing number of Late Neolithic sites, including Trelstyan (Britnell 1982), and the enclosures at Belle Tout and Sutton Hoo, further suggest complex and extensive forms of land division, and physical constraints on activities such as animal droving. These only make sense in the context of densely-occupied landscapes that were organised and managed in routinised ways, guided by clear knowledge of rights of ownership and inhabitation,
tenurial arrangements, agricultural regimes, and codes of social responsibility, loyalty and obligation.

From this perspective, generalisations about the nature of everyday social life during the Late Neolithic, based only on small-scale excavations of individual occupation sites, appear increasingly misleading. As the evidence from White Horse Stone/Pilgrim’s Way suggests, in common with the small number of extensively-excavated sites of this period elsewhere, it seems more reasonable to imagine durable and structured forms of landscape occupation, landholding and farming which—despite relative material ephemerality—defined everyday social and economic practices in ways that prefigured the more substantial and permanent settlements and field systems created in the 2nd millennium BC (cf. Johnson 2008, 274). In this light, it may well be necessary to reformulate current interpretations of Late Neolithic landscapes based only on readings of the evidence from

Figure 3.45 Comparative plans of Late Neolithic/Chalcolithic house clusters: 1. White Horse Stone/Pilgrim’s Way, Kent (Hayden 2006a, figs. 36, 40); 2. Trelystan, Powys (Britnell 1982, figs. 6, 7, 30.1); 3. Wyke Down, Dorset (Green 2000, fig. 47); 4. Durrington Walls, Wiltshire (Parker Pearson 2007, fig. 12.2)
ceremonial monuments, which have been extended all too easily to other less visible dimensions of cultural life. Although “terrains of ancestral memory” (Field 2008, 204) may have existed in the imaginations of people in the early 3rd millennium BC, alongside cosmographic constructions of landscape focused on the abodes of ‘ancestors’ (cf. Parker Pearson and Ramilisonina 1997), these interpretations appear to underestimate the relative significance of values and motives bound up with everyday practices, social identities and relationships, and how profoundly these concerns influenced the ways in which people conducted their lives.

It is notable, in fact, that Late Neolithic activity is very rare at ancient cultural places in the contemporary landscape that might be associated with ancestors, mythological domains or historical pasts, such as long mounds and causewayed enclosures. Activity at such sites seems to have been limited to occasional deposits in pits and silted ditch contexts, which may as easily relate to occupation practices as to ritual acts at ‘ancestral places’. Similarly, spatial relationships between Late Neolithic and Middle Neolithic monuments and deposits suggest only rare attempts to ‘reference’ things of the near-past: Grooved Ware pits, for example, mostly appear to be spatially separated from Peterborough Ware pits (suggesting patterns of avoidance), and there is nothing to indicate that the rare presence of Peterborough Ware sherds in Late Neolithic pit deposits is anything other than accidental re-deposition. Deliberate attempts to ‘delve into’ the past during the Late Neolithic to recover and re-circulate ancient materials or substances seem to be exceptionally rare, if not lacking altogether.

These observations are largely borne out by the evidence from White Horse Stone/Pilgrim’s Way. Although the positioning of the Late Neolithic pit groups and structures within and around the area of the White Horse Stone Early Neolithic long hall might have involved deliberate reference to the past, this was not repeated at the second long hall building to the south-east, and it is equally possible that the spatial relationship was coincidental. Insofar as history, memory and acts of remembrance were important, it would seem that at White Horse Stone/Pilgrim’s Way these were focused on things of the recent social past, and perhaps on materials that were recognisably ‘familiar’ and current within the wider material culture of the day, whether in daily tasks or special kinds of exchange and consumption. There seems little question that the majority of Late Neolithic pits were filled with re-deposited midden materials, in most cases in the course of deliberate acts after their original use had ended. This kind of process has been interpreted as a means to commemorate important times in people’s lives (J Thomas 1999, 70), as a way of expressing a sense of belonging to certain places or significant relationships with others (ibid., 87–8; J Harding 2006, 124), as acts of closure (‘burial’) of once-living places of residence, perhaps as a rite of passage to facilitate the process of ‘moving-on’ (Garwood 2011), and as devotional or sacrificial acts intended to renew the land or assure the good will of spirits or other supernatural forces (J Harding 2006, 124). What is striking in these interpretations, as in the material evidence from depositional contexts, is that nothing of the distant past figures at all, a point that could be made with respect to virtually all Grooved Ware-associated occupation sites and pit groups in southern Britain.

It is likely, of course, that some of the interpretative arguments presented in this section will be tempered in the light of a more detailed understanding of geographical variation in Late Neolithic material culture, settlement and landscape organisation. Grooved Ware deposition in pits, for example, seems to be very rare in some areas, such as the Middle Thames Valley (Lamdin-Whymark 2008a, 121-23). A similar pattern may be evident in parts of south-east England, such as the Ebbsfleet Valley, Thanet and the Sussex Downs, where extensive and/or long histories of fieldwork on prehistoric sites have produced almost no evidence for Grooved Ware deposition of any kind (Garwood, in prep. b). This seems to contrast radically with other regions, especially Wessex, where Grooved Ware deposits are relatively common and widespread, and where pit digging may have reached a peak during the Late Neolithic (eg J Thomas 1999, 69). In south-east England it is also striking that all the Grooved Ware assemblages for which dating evidence is available belong to the period c. 2900–2500 BC. Although the number of finds is still very low, it is possible that Grooved Ware currency, especially as a symbolic medium, lapsed in this area in the mid-3rd millennium BC, some time before this occurred in Wessex, the Upper Thames Valley and East Anglia (cf. Garwood 1999b). This might help to explain the lack of evidence for complex Grooved Ware depositional practices in pit contexts in the region. The widely-recognised shift from ‘simple/domestic’ to ‘complex/ceremonial’ kinds of Grooved Ware deposition, marked by increasing selectivity and formality, enhanced visibility and markers of ‘specialness’ (eg fine and/or exotic items), especially in pits and around the post settings of timber circles, seems to have been realised most fully in Wessex in the late 3rd millennium BC (cf. J Thomas 1999, 69–73, 86–8;Pollard 2001, 322–8; J Harding 2006), by which time Grooved Ware may have already largely disappeared from material culture repertoires in south-east England. The extent to which this coincides with the appearance of Beaker ceramics is uncertain, as the latter are poorly dated in the region and most recorded examples belong to the period after 2300 BC. Even so, it is possible that the adoption of Beaker pottery and practices—in this area at least—was bound up in some way with the demise of Grooved Ware ceramics and the kinds of social relationships and meanings these represented.

Chalcolithic and Early Bronze Age pits, settlement and landscape change

Long-term patterns of declining pit deposition and shifts in the socio-spatial contexts of this activity from settlements and ceremonial monuments to funerary settings
during the late 3rd and early 2nd millennia BC (J Thomas 1999, 69), seem to be registered in the limited HS1 evidence for pit deposition after c 2500 BC. Beaker pottery assemblages, for example, were recovered from just six sites along HS1 Section 1, only three of which had pit deposits: one at Eyhorne Street, one at Saltwood Tunnel and two at Beechbrook Wood, The other Beaker finds comprised two vessels accompanying burials at Northumberland Bottom (discussed below) and small groups of abraded sherds redeposited in later prehistoric and Roman-period features (at Whitehill Road, White Horse Stone and Saltwood Tunnel; Barclay et al. 2006, 16–20, 29–30, tbl.2.4). Pit deposits containing other kinds of Early Bronze Age pottery such as Food Vessel, Collared Urn and Biconical Urn material, were almost entirely absent along the HS1 Section 1 route except for a single Collared Urn pit burial at Northumberland Bottom, and Food Vessel-style pottery placed in a pit cutting the fill of Saltwood Tunnel Ring Ditch C10055.

The purpose and significance of non-funerary Beaker deposits are presently little-understood, though these clearly varied in relation to different kinds of pit contexts, their landscape settings, modes of deposition and assemblage composition. Moreover, whilst bearing some similarity to Grooved Ware practices, Beaker pit deposition of all kinds appears to be distinctive in terms of the social actions involved. The evidence from Beechbrook Wood (Fig. 3.46) is especially intriguing, particularly in terms of the scale and diversity of one of the pit deposits, and the spatial relationships between the Beaker pits (1716, 1374, and possibly 1336, which contained a similar ash fill to 1374 but no artefacts) and other features, notably Ring Ditch 1682, and the later Bronze Age and Iron Age field boundaries.

Pit 1716, a small shallow feature cut into the fill of Ring Ditch 1682, contained a complete Beaker lying on its side. This vessel (Fig. 3.47) is a small globular Beaker decorated all over with incised horizontal lines, consistent with Clarke's East Anglian (1970) and Needham's Globular styles (2005). These are dated by Needham to c 2100–1800 BC (ibid., fig. 13), though Clarke believed these vessels belonged to a relatively early stage in the Beaker sequence. It is possible that this was a burial, the skeleton having dissolved in the acidic soils (Brady 2006a, 15), although the form and location of the deposit could also suggest a votive, sacrificial or commemorative act, or perhaps a renewal ceremony.

Pit 1374, in contrast, was a much larger sub-circular feature, 1.7m x 1.3m across and 0.3m deep, with four fills representing a series of separate depositional episodes. The middle two dark ash fill layers contained charred plant remains, a few fragments of cremated human bone weighing 6g, a possible stone pestle, 111 pottery sherds (1616g), and an exceptionally large flint assemblage of 1370 worked flints, mostly chips and flakes, many burnt and broken, but also including three thumbnail scrapers and a barbed-and-tanged arrowhead (Fig. 3.48). An unusual fired clay object also found in the pit, a roughly-shaped rounded lump with one flat side and a pointed end marked by impressions of small finger tips and nails, including thumbprints that could resemble eyes, may be a toy hedgehog made by a child (Fig. 3.48). Another fired clay fragment may be the curved rim of a flue edge, possibly from an oven (Poole 2006).

The pottery assemblage from Pit 1374 comprises a large and diverse group of Beaker material (Fig. 3.48). Fragments of at least 14 vessels were present including examples of Clarke's Barbed Wire, East Anglian and Southern styles (1970), made in sand, flint and grog-tempered fabrics with varied forms ranging from cups or small bowls to taller carinated and globular vessels (Barclay et al. 2006, 24; Brady 2006a, 16–18). The source of this material is uncertain, though like Grooved Ware pit deposits it is likely that the fills derived from middens. This interpretation is supported by the presence of large amounts of burnt worked and unworked flint (possibly indicative of knapping around hearths), and a large quantity of charred plant remains (but only two cereal grains). The wide spread of radiocarbon age ranges obtained from layer 1377, on a charred hazelnut shell (2470–2200 cal BC; NZA-21170), Corylus charcoal (2290–2030 cal BC; NZA-22739) and a charred crab apple (2280–2030 cal BC; NZA-22738), suggest long use of a source midden or the collection of materials perhaps from more than one midden site. The fresh condition of some of the pottery, however, implies that no great length of time had elapsed before this material was finally buried, probably in the period 2200–2100 BC. This chronological evidence, and the diverse range of forms and decorative styles present, are broadly consistent with Needham's chronological framework (2005), which highlights the great variety of Beaker types during the last two centuries of the 3rd millennium BC, and in particular the co-presence of the globular and tall mid- and weak-carinated vessels which dominate this assemblage.

Parallels for Beaker pit deposits of this kind are rare, but appear to conform to a widespread pattern of depositional practice. In every case, the pits concerned are relatively wide ovate or sub-rectangular features ranging from 1.2 to 2.5m in length, 1.0–1.5m wide, and usually around 0.3–0.7m deep, with steeply angled or stepped sides and mostly flat or rounded bases. These contain multiple fill layers deriving from several separate dumps of soil and cultural material over a short period, often with refitting sherds from more than one fill. These features contain considerable quantities of unburnt and burnt flint artefacts, burnt stones/flints, charcoal and charred plant remains. The pottery assemblages, some very large, consist of fragments of incomplete vessels from a range of Beaker types, with a high proportion of decorated pieces, and often a mixture of fresh and abraded sherds possibly resulting from differential exposure to weathering within midden deposits or possibly in the pits themselves. At Whitemoor Haye, Staffordshire, for example, four successive fills within Pit F122W contained 349 pottery sherds from at least 10 vessels, 20 worked flint artefacts including a barbed-and-tanged arrowhead, and burnt stones (Hewson 2006, 21, 108–9; Woodward 2006, 69–70). The large shallow pit excavated at Longmore Hill Farm, Astley, Worcester-
Figure 3.46 Beechbrook Wood Beaker pits. Upper: site plan showing the location of Late Neolithic, Chalcolithic and Early Bronze Age features. Lower: Beaker pits 1716 and 1374 in relation to Ring Ditch 1682, earlier Mesolithic and Neolithic features, and the later Bronze Age and Iron Age field system.
shire, contained 125 pottery sherds from at least 17 vessels, 295 worked flint artefacts including several scrapers, a red sandstone grinding stone, and charcoal and burnt stones (Dinn and Hemingway 1992). Similarly, Yarnton Pit 3119, Oxfordshire, contained 250 Beaker sherds, a small flintwork assemblage, possible saddle quern fragments and a large quantity of burnt stone (Hey in prep.). Other examples include smaller pits at Lakenheath, Suffolk (Briscoe 1960), Longham Pit 178, Norfolk (Ashwin 1998), and Dean Bottom Pit 23, Wiltshire (Gingell 1992, 27). Although Beaker-associated pit deposition spanned the period 2500–1800 BC, the majority of Beaker pits containing such large quantities of cultural material date to the period 2400–2000 BC.

There are also numerous examples of Beaker pit groups containing small mixed artefact assemblages that closely resemble earlier Grooved Ware pit deposits. These are clearly different, however, from the pits with exceptionally large material assemblages described above, the spatial locations of which in relation to contemporary and later features suggest social strategies distinct from those connected with everyday activities at
Figure 3.48  Finds from Beechbrook Wood Pit 1374. Top: Beaker pottery, probably all East Anglian style including a small globular cup (P2), taller jars (eg P3) and more substantial ‘storage vessels’ (eg P7, P11). Lower left: flint artefacts: 14 - Multi-platform flake core; 15 & 16 - Thumbnail scrapers; 17 & 18 - End and side scrapers; 19 - Barbed-and-tanged arrowhead. Lower right: fired clay object, possibly a toy hedgehog.
settlement sites. At Beechbrook Wood, for example, Pit 1716 was dug into the side of a small round barrow (Ring Ditch 1682), which was used in the Bronze Age as a marker for the north-west end of a linear field boundary that extended for at least 300m to the south-east, while Pit 1374, located 44m to the south, occupied precisely the same relative position at the western end of another field boundary running parallel to the first (see Fig. 3.46). It is possible, therefore, that Pit 1374 was still visible as a hollow when the co-axial field system was laid out in the late 2nd/early 1st millennium BC, or that another long-lived landscape feature such as a trackway influenced the positioning of both Pit 1374 and the later field boundary. Either way, Pit 1374 and the burial of the Beaker pot in Pit 1716 may have been part of an earlier technology of land division, involving physical marking of the landscape and the embedding of significant cultural materials at key points of transition or delimitation, which the later system of Bronze Age earthworks formalised or enhanced. It may be no coincidence that the double Beaker burial at Northumberland Bottom (discussed below), presumably under a low mound, was also positioned at the junction of a holloway and two later linear earthworks.

The specific motives and rationales underlying complex pit deposition events are also obscure. It is possible, however, that the assemblage of a diverse range of Beaker ceramics and other materials involved several social groups with shared interests (cf. Woodward 2006). This becomes a more compelling argument if related to a process of landscape organisation in which a number of communities or kin groups were committed to the maintenance of fields and effective cereal production, possibly forming the basis for broader social and spatial structures required for the organisation of the landscape and the embedding of significant material culture. For example, the specific location of a particular pit or monument, such as the double Beaker burial at Northumberland Bottom, may have been chosen to mark the junction of a holloway and two later linear earthworks, possibly under a low mound, in a location that was significant for the organisation of the landscape and the embedding of significant material culture.

Environmental evidence for clearance and farming along the HS1 route during the 3rd millennium BC is limited and ambiguous. The charred plant remains recovered consisted mainly of the residues of wild foodstuffs, especially hazelnut shells (in large amounts at White Horse Stone, Eyhorne Street, and Little Stock Farm), together with crab apples, while cereal grains in Grooved Ware and Beaker pits were extremely sparse everywhere (Giorgi and Stafford 2006). This seems surprising if cereals were a dietary staple, although their presence in depositional contexts may have been limited because of crop-processing methods (Robinson 2000), and food preparation techniques (e.g., soaking and indirect heating) that involved only a very low risk of charring. Taphonomic factors may also have led to differential survival of some categories of carbonised material, especially durable hazelnut shells in comparison with cereals. It is difficult, therefore, to evaluate either the scale of agrarian production or the degree of subsistence dependency on cereal production. Similar problems arise with the interpretation of animal bone assemblages. These were recovered almost entirely from the Late Neolithic pits, hollows and tree-throw holes at White Horse Stone, mostly comprising cattle remains but also including pig, sheep/goat and a small number of dog bones. The cattle bones were predominantly from juvenile animals, which may indicate a significant emphasis on dairy production as well as meat consumption, while the relatively high incidence of bones from younger pigs may also suggest a meat-rich diet. The presence of a few aurochs and roe deer bones also suggests hunting in woodlands.

Land snail assemblages from Late Neolithic pits at White Horse Stone were dominated by shade-demanding species, but variation from one context to another suggests this may relate more to the micro-environments existing around features rather than the wider character...
of the landscape. Certainly, the presence of open country species suggests areas of scrub and lightly-grazed grassland. The apparent increase in open country xerophile species during the late 4th and 3rd millennia BC may indicate a trend to more open grassland conditions in the valley bottom (Stafford 2006b), but it is impossible to know how far this is representative of environmental changes during this period along the HS1 route or in south-east England more widely (Wilkinson 2003). Indeed, there must have been considerable local diversity, with some areas cleared, and then cultivated or used for pasture in a sustained way for centuries, with many different local histories of woodland or scrub regeneration (K Thomas 1982; Preece and Bridgland 1998; Wilkinson 2003).

Whilst the palaeo-environmental sequence across south-east England is thus ambiguous at best, there is no question that the cultural landscapes of the late 3rd and early 2nd millennia BC underwent a significant transformation as new monuments—round barrows—were constructed in great numbers, often in places that had been thinly inhabited previously. In some areas, especially to the south of the chalk escarpment in the northern part of the Weald, these construction events appear to be related to wider woodland clearances and more sustained occupation, possibly associated with greater investment in agrarian production. Although it is often difficult to establish the exact character of land use or the environmental settings in which such monuments were built, it is clear that these structures and the funerary practices associated with them articulated new kinds of relationships between living communities, the dead and the landscape.

**Chalcolithic and Early Bronze Age monuments and the landscapes of the dead**

The period between c 2500 and 1500 BC is associated with a wide range of burial traditions and the proliferation of round barrow funerary monuments—to such an extent that they seem to dominate the cultural landscapes of the Early Bronze Age. This coincides with the appearance of copper and bronze artefacts, the end of large-scale ceremonial monument construction and the demise of Grooved Ware-associated depositional practices. Within this broader framework it is now possible to distinguish three phases of funerary practice and monumentalism in southern Britain, based on reassessments of burials, material culture (eg Needham 2005) and round barrow chronologies (Garwood 2007a):

**2450–2150 BC.** This phase is marked by the first appearance of metalwork (copper) and early Beaker burials, some associated with a distinctive artefact set including items such as tanged copper daggers (Needham’s ‘primary package’; 2005). Burial monuments consisted of relatively small, mostly single phase round mounds with single central inhumation burials, primarily of adult males. Also fairly common were ‘open arena’ ceremonial monuments such as ring barrows and ring cairns, usually without burials.

**2150–1850 BC.** The beginning of this phase is marked by the transition in Britain from predominantly copper to bronze production (Pare 2000), and by increasing numbers of Beaker burials associated with a diversified range of vessel types and overlapping artefact sets (Needham’s ‘fission horizon’; 2005). Other distinctive funerary ceramics also appear during this phase, notably Food Vessels (from c 2150 BC) and Collared Urns (from c 2000 BC), the latter related to the increasing frequency of cremation burials. Small round barrows continued to be built throughout this period, but there are also numerous examples of large multi-phase mound structures, complex burial sequences and free-standing timber structures such as stake-circles. Open arena monuments built at this time, such as ring barrows, ring cairns and pond barrows, were also often associated with multiple burial deposits.

**1850–1550 BC.** Although there are examples of later mound enlargements and other kinds of elaboration after 1850 BC, most round barrows appear to be single-phase mounds built over centrally-placed single graves. These structures should not, however, be viewed in isolation: one of the most striking and evocative features of round barrows built during this phase is their deliberate positioning to create monument groups, especially the impressive linear arrays found mainly in southern and eastern England, which suggest narratives of ‘lineal’ descent or succession (Garwood 2007a). Cremation burials predominate, many just with urns (eg Collared, Food Vessel, Cordoned and Biconical) or unaccompanied by durable artefacts, but there are also numerous examples of ‘rich’ graves defined by the large scale and complexity of assemblages including exotic items made of materials such as gold, amber, marine ivory, jet and faience (eg ‘Wessex’ burials).

As this chronological summary demonstrates, there was considerable variation in the purpose and use-histories of different kinds of monuments, and major transformations in the significance of funerary architecture over time. Although some round barrows may well have acted essentially as memorials, fixing the presence of the significant dead in the landscape, their architectural forms and positioning also suggest that they were designed to guide ritual action both spatially and semantically. Linear round barrows groups, for example, appear to have been monument complexes incorporating avenues and arenas that provided stages for repeated ceremonial performances (Garwood 1999c, 298–309; 2003, 60–1; 2007a). Moreover, whatever their social and political significance, it is clear that funerary monuments and rituals reified cosmological schemes, invoking beliefs concerning spirits and powers that transcended everyday
social concerns (ibid.; Healy and Harding 2007; Last 1998; Owoc 2001a, 2001b). Conceptualisations of the past, history and ‘belonging’ appear to have been given particular prominence in funerary symbolism during this period, especially after 2150 BC when there is widespread evidence for the reworking of old monuments and human remains, burial sequences within graves, and heirlooms among grave goods (Woodward 2002a). Indeed, the locations of round barrows in many cases close to earlier ceremonial and burial monuments suggests the creation of particular relationships with ‘past’ features of the built landscape, so that the meanings attached to burial events were bound up with the meanings attached to the locales chosen for funerary deposition. The spatial and landscape contexts of Chalcolithic and Early Bronze graves and monuments are thus crucial for understanding their significance.

In comparison with the attention paid to the Chalcolithic and Early Bronze Age funerary archaeology of Wessex, there has been relatively little previous research work on round barrows in south-east England, although some recent county-scale and local surveys of the evidence from Kent (Champion 2007c, 87–92; Grinsell 1993; Perkins 1999), Surrey (Needham 1987, 105–8) and Sussex (Garwood 2003), provide a basis for regional synthesis and interpretation (Garwood, in prep. b). The distribution of round barrow investigations in the region is notably uneven, with very few sites excavated on the North Downs in comparison with the South Downs, and a general dearth of round barrow excavations in the central Weald and the Sussex and north Kent coastal plains. In Kent, with the notable (recent) exception of the Isle of Thanet, where intensive developer-funded work since 1995 has quadrupled the number of excavated sites, there have been remarkably few round barrow excavations either by antiquarians or archaeologists. In this context, the 16 ring ditches and two probable unditched round barrows investigated along the HS1 route comprise about a third of the Chalcolithic and Early Bronze Age funerary sites excavated to modern standards in the whole of Kent.

**Chalcolithic and Early Bronze Age funerary monuments**

Details of the Chalcolithic and Early Bronze Age round barrows and related sites excavated along the HS1 route are summarised in Table 3.3, and their ground plans are shown in Figure 3.49. Although these represent a significant addition to the regional corpus of sites excavated under modern conditions, the evidence from these sites is problematic in several respects and most provide relatively little information concerning monument architecture and use.

These monuments were all truncated by ploughing (and at Whitehill Road also levelled by 19th century railway construction: Bull 2006a, 7), so that even the presence of mound superstructures remains uncertain. The former existence of internal mounds can be inferred by asymmetrical ditch fills at Cobham Golf Course (Brady 2006b, 9), the concentric arrangement of the outer ditch and pit features around the inner ditch at Whitehill Road (Bull 2006a), and by the positioning of later pits and linear features that respect a 10m diameter area around the Beaker grave at Northumberland Bottom (Askew 2006, 12). The presence of a mound within Beechbrook Wood Ring Ditch 851 may also be suggested by the form of a later ring ditch (1007) which became shallower where it crossed the earlier ditch and its interior (Brady 2006a, 13), possibly where it cut through a raised mound. Evidence for more elaborate architectural features is generally lacking though a low external bank may perhaps be indicated by asymmetrical ditch fills at Tutt Hill Ring Ditch 156 (Brady 2006b, 9). The spatial design and scale of the 16 recorded ring ditches offer little additional information, although the continuous circuits, large diameters and greater depths of at least eight of these, allied in a few cases with dating evidence, suggest they are best interpreted as ‘classic’ Early Bronze Age round barrows with central mounds: Whitehill Road Ring Ditch 40130; Tutt Hill Ring Ditches 89, 90, 156; and Saltwood Tunnel Ring Ditches C10055, C10082, W201 and W33. Whilst it is possible that some of the ring ditch sites represent un-mounded ‘open arena’ monuments such as ring barrows (Garwood 2007a, 34–6) or Late Neolithic ‘hengiforms’, this is not demonstrable on the basis of the evidence available and certainly cannot be assumed because of the presence of penannular or segmented forms with ‘entrance’ gaps, which by comparison with better-preserved monuments elsewhere are just as likely to have surrounded mounds as open areas; eg Amesbury 51, Wiltshire (with a segmented ditch; Ashbee 1975/76), and Kingston Russell 6g, Dorset (with a penannular ditch; Bailey 1980). Overall, therefore, while it is impossible to be certain about the architectural forms of any of the Chalcolithic and Early Bronze Age monuments, the majority probably had central mounds.

Similar uncertainties surround the purpose and use-histories of these monuments. The high degree of truncation and other disturbance at each of these sites resulted in the almost complete destruction of evidence for pre-mound and later free-standing timber and earthen structures, burials and material deposits. Several postholes and pits within the inner ring ditch of the Whitehill Road barrow (Bull 2006a), and an incomplete rectilinear arrangement of postholes or small pits just to the south and west of the central grave of Saltwood Tunnel Ring Ditch C10082 (Riddler and Trevathan 2006, 11), may represent structures or activity areas, but their purpose is unknown and dating evidence is lacking in both cases. The temporalities of phases of monument construction, use and disuse, and the nature and rapidity of erosion and soil formation processes, are also not well-understood at any of the HS1 ring ditch sites, although in every case where evidence is available there appears to have been a process of uninterrupted natural silting of ditches (eg the Saltwood Tunnel sites), with no sign of re-cutting or cleaning.
Table 3.3 Round barrows, ring ditches and associated monuments investigated along HS1 Section 1.

<table>
<thead>
<tr>
<th>Site Description</th>
<th>Monument form</th>
<th>Ditch/mound int. diameter</th>
<th>Ditch max. width/depth</th>
<th>Dating evidence for construction</th>
<th>Burials/Other placed deposits</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitehill Road 40131 (inner ring ditch; 3)</td>
<td>RD: circular, continuous</td>
<td>10.25m</td>
<td>1.0m / 0.25m</td>
<td>C14: 2-sigma age deposits ranges, cal BC</td>
<td>Burnt deposits?</td>
<td>Bull 2006a, 7-10</td>
</tr>
<tr>
<td>Whitehill Road 40130 (outer ring ditch; 4)</td>
<td>RD: circular, continuous</td>
<td>15.60m</td>
<td>1.40m / 0.80m</td>
<td>Grave 42; 1620-1440 cal BC</td>
<td>Inhumation grave; amber necklace</td>
<td>Bull 2006a, 7-10</td>
</tr>
<tr>
<td>Cobham Golf Course RD 230</td>
<td>RD: circular, penannular</td>
<td>22.00m</td>
<td>1.40m / 0.70m</td>
<td></td>
<td></td>
<td>Davis 2006, 7-9</td>
</tr>
<tr>
<td>Northumberland Bottom</td>
<td>No ditch; mound?</td>
<td>10.00m?</td>
<td>N/A</td>
<td></td>
<td>Inhumation graves 1203, 1070, 1069</td>
<td>Askew 2006, 11-12</td>
</tr>
<tr>
<td>Tutt Hill RD 81</td>
<td>RD: subcircular, segmented (?)</td>
<td>13.00-15.00m</td>
<td>0.30m / 0.16m</td>
<td>Charcoal, on primary continuous (?) fill (re-deposited?)</td>
<td>Burnt deposits on primary fill</td>
<td>Brady 2006b, 10-11</td>
</tr>
<tr>
<td>Tutt Hill RD 89</td>
<td>RD: circular (?); continuous (?)</td>
<td>22.00m</td>
<td>1.30m / 0.55m</td>
<td>Charcoal, primary fill (re-deposited?)</td>
<td></td>
<td>Brady 2006a, 10</td>
</tr>
<tr>
<td>Tutt Hill RD 90</td>
<td>RD: circular, continuous (?)</td>
<td>22.00m</td>
<td>2.00m / 0.90m</td>
<td></td>
<td></td>
<td>Brady 2006b, 10</td>
</tr>
<tr>
<td>Tutt Hill RD 156</td>
<td>RD: subcircular, continuous</td>
<td>22.00-26.00m</td>
<td>2.00m / 0.80m</td>
<td>Charcoal, primary fill (re-deposited?)</td>
<td>Burnt deposits?</td>
<td>Brady 2006b, 9-10</td>
</tr>
<tr>
<td>Beechbrook RD 851</td>
<td>RD: circular, continuous</td>
<td>6.30m</td>
<td>2.00m / 0.80m</td>
<td>Charred hazelnut shells, middle fill</td>
<td>Redeposited burnt bone, upper fills</td>
<td>Brady 2006a, 13</td>
</tr>
<tr>
<td>Beechbrook Wood Grp 1021</td>
<td>C-shaped (?); segmented (?)</td>
<td>9.50m</td>
<td>No record</td>
<td>Redeposited burnt bone, lower fills</td>
<td></td>
<td>Brady 2006a, 13</td>
</tr>
<tr>
<td>Beechbrook Wood RD 1007</td>
<td>RD: circular; segmented (3)</td>
<td>18.00m</td>
<td>0.70m / 0.35m</td>
<td></td>
<td></td>
<td>Brady 2006a, 14</td>
</tr>
<tr>
<td>Beechbrook Wood RD 1682</td>
<td>RD: circular, continuous</td>
<td>4.20m</td>
<td>0.75m / 0.20m</td>
<td>Fill cut by Beaker pit 1716</td>
<td>2e pit containing Beaker pot</td>
<td>Brady 2006a, 15</td>
</tr>
<tr>
<td>Beechbrook Wood RD 2025</td>
<td>RD: circular, continuous</td>
<td>14.00m</td>
<td>1.10m / no info</td>
<td></td>
<td></td>
<td>Brady 2006a, 16</td>
</tr>
<tr>
<td>Saltwood Tunnel C10020</td>
<td>RD: circular, continuous</td>
<td>12.00m</td>
<td>0.95m / 0.35m</td>
<td></td>
<td></td>
<td>Riddler &amp; Trevathan 2006</td>
</tr>
<tr>
<td>Saltwood Tunnel C10082</td>
<td>RD: circular, continuous</td>
<td>35.00m</td>
<td>4.00m / 1.00m</td>
<td>Central FV grave: 2200-1940 cal BC</td>
<td>Central inhumation grave Pit 3896: 2e deposit, FV sherds</td>
<td>Riddler &amp; Trevathan 2006, 10-11</td>
</tr>
<tr>
<td>Saltwood Tunnel C10055</td>
<td>RD: circular, continuous</td>
<td>24.00m</td>
<td>3.20m / 1.20m</td>
<td></td>
<td>2e deposit Urn sherds in ditch fill</td>
<td>Riddler &amp; Trevathan 2006, 10-11</td>
</tr>
<tr>
<td>Saltwood Tunnel W201</td>
<td>RD: subcircular, continuous</td>
<td>21.00-23.00m</td>
<td>2.00m / 0.65m</td>
<td></td>
<td></td>
<td>Riddler &amp; Trevathan 2006</td>
</tr>
<tr>
<td>Saltwood Tunnel W33</td>
<td>RD: circular, continuous (?)</td>
<td>36.00m</td>
<td>4.00m / 1.35m</td>
<td></td>
<td></td>
<td>Riddler &amp; Trevathan 2006</td>
</tr>
</tbody>
</table>
Only in two cases is there clear evidence for monument elaboration and long-term use or re-use, in the form of concentric ditches suggestive of a multi-phase process of enlargement. At Whitehill Road, the insubstantial shallow inner ditch was the focus for several pit-digging events around the north-east side, some of which were later cut by the outer ditch (Bull 2006a, 9). Although it is possible that Grave 42, which cut the inner ditch fills on the south-west side, belongs to this second mound-building phase, it is more likely that the burial was a later insertion into the mound edge. Unlike the second ditch, which was carefully constructed so that it was concentric with the inner ditch (and presumably the upstanding mound), the grave pit is orientated tangentially to the edges of both ditches, suggesting a quite different spatial relationship. The radiocarbon date from the inhumation burial of 1620–1440 cal BC thus provides a terminus ante quem for the second phase monument, consistent with the wider range of evidence for mound enlargement practices involving concentric ditch construction mainly in the...
period 2150–1800 cal BC (Garwood 2007a). The monument sequence at Beechbrook Wood Ring Ditches 851, 1021, and 1007 is more complicated and more ambiguous. Here, an insubstantial heavily truncated ring ditch or C-shaped enclosure (1021), located just to the south-west of a small annular ring ditch with a central mound (851), was surrounded by a larger concentric segmented ring ditch (1007), which cut the ditch fills and mound of the neighbouring monument, 851, but was designed so that one of the causeways allowed access between the mound of 851 and the interior of 1021/1007. This suggests a deliberate attempt to co-relate the meanings and roles of these monuments in such a way that they formed an articulated ‘whole’ and possibly a complex ceremonial ‘stage’ with several distinct ‘nested’ spaces for ritual performances.

Although the purpose and significance of Chalcolithic and Early Bronze Age ring ditches are open to a range of diverse interpretations, they are usually associated with funerary practices. In this light, the great rarity of burials at the HS1 Section 1 sites is particularly striking (Tables 3.3, 3.4; discussed further below). Only one ring ditch has a surviving burial in a central context (Saltwood Tunnel Ring Ditch C10082), and there is only one example of a burial in a secondary peripheral position (Whitehill Road Grave 42). In contrast, 13 of the ring ditch sites have no evidence for mortuary deposition of any kind, which could indicate that some at least were never used for burial at all but were instead arenas for ceremonial activities, shrine sites or ‘empty barrows’ intended for non-funerary memorialisation or use as cenotaphs (as Brady suggests for some of the Tutt Hill and Beechbrook Wood sites: 2006b, 11–12; 2006a, 14–16). Whilst there is no doubt that some Chalcolithic and Early Bronze Age monuments were not used primarily for burial (cf. Garwood 2007a, 34–6; Healy and Harding 2007, 57–66), the evidence from most of the HS1 ring ditches is too limited and ambiguous to make a strong case either way. There are several other factors that may have led to the absence of burials: plough-truncation; original deposition of burials in surface or mound contexts that have since been destroyed; biotic or chemical degradation of human remains (eg in sandy soils at Tutt Hill and Beechbrook Wood); limited deposition of incomplete bodies; and rare burial events resulting in limited evidence for mortuary practices in the first place. More widely, the absence of burials at ring ditch sites is not unusual, and even extensive investigations of groups of plough-truncated ring ditch sites often produce little in the way of funerary evidence. At Monkton, Thanet, for example, burials were present at only two of the 10 ring ditches excavated (Bennett et al. 2008, 21–46), and burials were entirely absent from the ring ditches excavated at Lodge Farm, St. Osyth, Essex (four sites: Germany 2007, 33–8), and Biddenham Loop, Bedfordshire (six sites: Luke 2008, 24–8).

Other kinds of deposits occur more widely but still rarely amongst the HS1 ring ditches (see Table 3.3), including pottery fragments possibly eroded from a destroyed funerary deposit (Biconical Urn sherds in the secondary fill of Saltwood Tunnel Ring Ditch C10055), redeposited remnants of possible secondary burials (tiny amounts of burnt human bone in the ditch fills at Beechbrook Wood Ring Ditches 851 and 1021), and ambiguous ‘burnt deposits’ (in the inner ditch at Whitehill road, and in Tutt Hill Ring Ditches 89 and 156). None of these deposits appears to have been deliberately ‘placed’ except for the burnt deposits on top of the primary fills in Tutt Hill Ring Ditches 89 and 156 (Brady 2006b, 9–10; discussed below). Artefacts in two further pit contexts, in contrast, do seem to represent special depositional acts. Food Vessel sherds were placed in Saltwood Tunnel Pit 3896, which cut the fill of Ring Ditch C10082 at a point due east of the central burial (which contained a complete Food Vessel; Riddler and Trevarthen 2006, 10–11), and a complete Beaker was placed in Pit 1716 which cut the partly-filled Beechbrook Wood Ring Ditch 1682 (though it is also possible this was a secondary burial, the body having dissolved in the acidic soil conditions; Brady 2006a, 15).

In the light of the preceding discussion it is unsurprising that dating evidence for the HS1 ring ditch sites is extremely limited, derives from contexts that are not directly related to construction events, and are often ambiguous in terms of their dating value because of possible redeposition. In only two cases can monument construction be dated with any confidence. First, the inhumation burial associated with a Food Vessel at the centre of Saltwood Tunnel Ring Ditch C10082 has been radiocarbon dated to 2290–1940 cal BC (Riddler and Trevarthen 2006, 10–11): it is probable but not definite that this was contemporary with mound construction. Second, a short-life charcoal sample derived from twigs and small branches, recovered from one of the two localised dumps of burnt material on top of the primary fill of Tutt Hill Ring Ditch 89, provided a radiocarbon date of 1750–1530 cal BC (NZA-21140; Brady 2006b, 10). The contextual evidence suggests these were not deposits of residual charcoal that had eroded into the ditch from the old land surface, but rather the result of deliberate depositional acts not far removed in time from the ditch-digging event.

Although the presence of built monuments is far less certain in the case of the Northumberland Bottom and Saltwood Tunnel C4507 ‘flat grave’ inhumation burials, there is nonetheless good reason to believe that both had low earth or turf mounds (discussed further below). The two adult burials at Northumberland Bottom provided radiocarbon dates of 2280–1980 cal BC (NZA-22736) and 2120–1780 cal BC (NZA-22735), while the burial in Saltwood Tunnel grave C4507 produced a date of 2290–1970 cal BC (NZA-19886).

The three remaining radiocarbon dates from HS1 ring ditch sites are difficult to interpret. A small amount of charcoal from the primary fill of Tutt Hill Ring Ditch 156, dated to 2340–2040 cal BC (NZA-21141), could have been deposited soon after monument construction, but the presence of Peterborough Ware and Beaker pottery also suggests a mixed deposit derived from residual occupation material on the old land surface (Brady 2006b, 9). The same observation applies in the case of a charred hazelnut.
shell, radiocarbon dated to 2310–2030 cal BC (NZA-20027), recovered from the middle fill of Beechbrook Wood Ring Ditch 851 which also contained redeposited Early and Middle Neolithic artefacts (ibid, 13–14). These two radiocarbon dates only provide termini post quos for the ring ditch fills above the sample source contexts, and cannot be used to date either monument construction events or periods of use. The latter date is useful, however, in providing a terminus post quem for construction of Beechbrook Wood Ring Ditch 1007, one segment of which cuts the upper fill of 851. Finally, at Whitehill Road barrow, the uncertain relationship of the radiocarbon-dated inhumation burial in Grave 42 to the monument construction sequence has already been discussed: it probably only provides a terminus ante quem of 1620–1440 cal BC for the final mound building episode.

It is conceivable, of course, that some of the HS1 ring ditches could be Middle or Late Bronze Age in date. Small annular and penannular ditched funerary monuments of the mid- to late 2nd millennium BC are relatively common in southern Britain, including several examples in south-east England (Champion 2007c, 109–11; Garwood 2003, 52), notably Ditch Ranges VI, VII, VIII and X at Monkton, Kent (Bennett et al. 2008, 35–46), Barrow 2 at Bridge (Site 9), Kent (Macpherson-Grant 1980a), and Itford Hill, East Sussex (Holden 1972). These are usually associated with cremation burials, both un-urned and urned, often in secondary contexts within and around mounds and ring ditches, although there are also many sites belonging to this period which lack evidence for burials altogether (eg most of the ring ditches at the later Bronze Age Ardleigh-style ‘cemetery’ at St. Osyth, Essex: Germany 2007, 38–43). Where ceramic vessels are present at all, these consist mostly of Deverel-Rimbury or later regional urn styles.

It is striking, in this context, that there is no evidence at all for construction of any of the HS1 ring ditches during the Middle or Late Bronze Age, and indeed very little sign of funerary or other kinds of deposition at these sites after c 1600 BC (see Champion, Chapter 4). At Saltwood Tunnel, for example, Middle Bronze Age funerary activity occurred some distance from the ring ditch sites, which produced no evidence for re-use or later activity until the Anglo-Saxon period (Riddler and Trevarthen 2006). Only at Tutt Hill is there evidence for Middle Bronze Age activity close to the earlier monuments, with a cremation burial in a Bucket Urn placed in a small pit located between Ring Ditches 81, 89 and 156, a deposit of pyre debris with small amounts of cremated bone in a pit close to Ring Ditch 90, and two sherds of pottery in the upper ditch fills of Ring Ditch 156 (Brady 2006b, 9, 15–16). The absence of Middle Bronze Age material from primary ditch fills, and the general low level of activity represented, however, suggests these depositional events took place at least two or three centuries after the ring ditch monuments were built. The wider absence of Middle Bronze Age ceramics and cremated human bone from upper ditch fills, except for tiny amounts at Beechbrook Wood ring ditches 851 and 1021, certainly indicates that there was no significant re-use of HS1 round barrow sites as cremation cemeteries during the later 2nd millennium BC. The forms and sizes of truncated ring ditch sites offer no reliable guide to their date. Annular ring ditches of many different sizes, for example, were built at various stages throughout the late 4th, 3rd and 2nd millennia BC. Although it is possible to recognise some distinctive constructional features, these are not exclusive to particular periods (at least at the level of classificatory discrimination currently applied). For example, penannular ditches are associated both with Beaker graves of the late 3rd millennium BC (eg Pyecombe, Sussex: C Butler 1991) and with later Bronze Age urn cemeteries of the late 2nd millennium BC (eg at Simons Ground, Dorset; White 1982). Similar observations can be made with reference to ovate, segmented and rectilinear ditch forms. It is possible that a typochronology of ring ditches will emerge in the future, but at present there is not enough reliable, unambiguous dating evidence, or sufficient comparative analysis of ring ditch morphologies and constructional attributes to propose such a scheme even at a regional scale. It is possible, however, to find a few parallels for some of the HS1 ring ditch sites among the wider range of excavated sites in south-east England. The double concentric ditch form of the Whitehill Barrow, for example, is similar to West Heath III, West Sussex (Drewett 1976), and Monkton Ring Ditch 3, Kent (Bennett et al. 2008), both of which probably date to the period 2100–1800 BC, and the Thanet Earth double ring ditch associated with a central Beaker burial dating to c 2100 BC (Robert Masefield, pers. comm.). Monument elaboration/enlargement episodes at other multi-phase sites in Kent with three or more ring ditch circuits and/or complex sequences of monument redesign, notably Lord of the Manor 1 (Macpherson-Grant 1977), the Eythorne barrow (Parfitt 2004c) and White Caps Barrow, Eastry (Parfitt et al. 1997), all belong to the same period (cf. Garwood 2007a, 32–4). In this light, the preferred interpretation of the Whitehill Road barrow construction sequence would also place this within the period 2100–1800 BC.

There are fewer parallels for the unusually large penannular ring ditch at Cobham Golf Course, which has an internal diameter of 22m, more than twice the width of nearly all other sites of this kind excavated in the region. The only exceptions are the outer ditch at Eythorne, c 17–18m across internally (Parfitt 2004c), and Lord of the Manor Site 2D, Kent, with an internal diameter of 15m (Perkins and Macpherson-Grant 1981). Unlike the Cobham site, both of these had wide ditches, which at Lord of the Manor Site 2D was dug as a series of linked pits (ibid.). The most comparable site in terms of its relatively narrow U-profile ditch is Enclosure 30369 at Westhampnett Area 3, West Sussex (Fitzpatrick et al. 2008, 117–28), but this was only 11m across with an off-centre cremation burial beneath an inverted urn, associated with oak charcoal dated to 1870–1520 cal BC. At Wouldham, Kent, a similarly small ring-ditch, with a wide gap on the north-west side, had a central cremation burial beneath an inverted Biconical Urn (Cruse and Harrison 1983). The elongated pear-shaped ring ditch with a central Beaker burial at Pyecombe, Sussex (C
Butter, is also unlike the Cobham site, while the small ring ditch associated with several inhumation burials at St Stephen’s College, North Foreland, Thanet (Barrow 3; Boast et al. in prep.) has squared-off ditch terminals and a flat base. Finally, the two penannular ring ditch sites at Monkton, Thanet (VI and VII; Bennett et al. 2008, 35–7), are much smaller than the Cobham example and are associated with Deverel-Rimbury ceramics and external crenation burials that probably date to the 15th–13th centuries BC. In the absence of direct chronological evidence or clear parallels it is impossible to date the Cobham ring ditch with any certainty. The presence of redeposited Collared Urn and Food Vessel sherds in the upper ditch fills, possibly from ploughed-out deposits around the mound (Davis 2006, 8), only demonstrates Early Bronze Age activity in the immediate area of the monument.

The most distinctive of the other HS1 ring ditches are the segmented or ‘causewayed’ sites at Tutt Hill and Beechbrook Wood. The discontinuous circuit of Tutt Hill Ring Ditch 81 may, however, owe more to truncation than design (Brady 2006b, 10). In contrast, the plan of Beechbrook Wood Ring Ditch 1007 (Brady 2006a, fig. 15), suggests a more formal and coherent layout, comprising three ditch segments of unequal length defining a circle 18m in diameter. This has no parallels in south-east England and very few elsewhere (Ashbee 1975/1976, App.1), although a number of possible causewayed ring ditches have been recorded recently in southern Britain in the course of geophysical and air photographic surveys (eg L242 and L269 at Biddenham Loop, Bedfordshire; Luke 2008, fig. 6.2). Unlike Beechbrook Wood 1007, the closest comparable excavated sites in this region, have central inhumation burials of either Late Neolithic (eg Stanton Harcourt XXI.1, Oxfordshire; Barclay et al. 1995, 99) or Chalcolithic date (eg Amesbury 51, Wiltshire; Ashbee 1975/1976). The latter is probably the closest parallel in terms of ring ditch size, proportions and lay-out: this consisted of five ditch segments forming a 20m diameter circular enclosure, at the centre of which was a large pit containing a wooden chamber and a series of Beaker inhumation burials covered by an earthen chalk-capped mound. The chronology of monument construction and mortuary deposition at Amesbury 51 falls within the period c 2450–2100 BC, which is not inconsistent with the suggested post-2200 BC construction date for Beechbrook Wood 1007. More widely, it is possible to find other examples of segmented ring ditches that are also devoid of mortuary evidence, such as Hengiforms 155 and 161 at Ferrybridge, South Yorkshire (Wheelhouse 2005). Unfortunately, these sites, like the HS1 ring ditches, are heavily plough-truncated, of uncertain purpose, and again lack dating evidence.

The only other HS1 site with features that invite comparative analysis is Saltwood Tunnel C10082, a large single phase ring ditch surrounding a central burial. Although monuments of this kind occur throughout the period 2400–1600 BC, large single-phase round barrows with internal ditch diameters of more than c 30m are rare before 1900 BC, and indeed uncommon in some parts of Britain throughout the Chalcolithic and Early Bronze Age (Garwood 2007a, 36–7; 2007b, 147). In this context, the likely construction date of 2200–1940 cal BC for Saltwood Tunnel C10082, provided by the central burial associated with a Food Vessel, suggests this is an unusually early example of such a monument not only in south-east England but in southern Britain as a whole. In regional terms, the large, un-ditched, 20m-diameter earth mound at Black Burgh, East Sussex, with a central ‘rich grave’ probably dating to c 2000–1900 BC (Lane Fox 1877; Garwood 2003, 52–3), is the most similar in architectural scale, although probably later in date and more complex in funerary terms. The Great Barrow at Bishop’s Waltham, Hampshire, with an ovate ditch 45 x 50m in internal diameter, and an off-centre mound 30m across covering a complex burial deposit in a wooden coffin (Ashbee 1957), probably also dates to the period 2000–1900 BC, based on relative dating of the associated grave goods. The only other comparable radiocarbon-dated site in southern Britain is Radley Barrow 3, Oxfordshire, with a 25m diameter single-phase ring ditch and central dagger-associated inhumation burial dated to 2360–2130 cal BC (at 57% probability; Garwood 1999a, 290–3). Examples of similar monuments recorded by early excavators are rare and usually poorly dated, although Mortimer’s Barrow 23 on Calais Wold, North Yorkshire, is similar to Saltwood Tunnel C10082 in having a 30m diameter ring ditch and a single central Food Vessel-associated inhumation burial (surrounded by stake circles and sealed beneath a large mound: Mortimer 1905, 153–56). The HS1 ring ditch sites thus provide some new structural and chronological information relevant to regional interpretations of Chalcolithic/Early Bronze Age monumental architecture, although the lack of evidence for mound superstructures and the rare survival of funerary deposits (discussed below) severely limit the potential for more detailed study. As already discussed, this is not an unusual outcome for an extensive programme of ring ditch investigation, and in fact further highlights the particular vulnerability of round barrow architecture to erosion and plough truncation. More revealing, perhaps, are the ways in which individual monuments were co-related or inter-referenced spatially, both at the local scale of round barrow group ‘cemeteries’ or ‘ceremonial complexes’, and in terms of their role in the large-scale structuring of the wider cultural landscape.

The spatial organisation and landscape settings of the funerary monuments

The locations of Chalcolithic and Early Bronze Age graves and monuments were plainly significant for those who chose them, whether in terms of claims to territory, rights of access, political statements about identity, affinity and history, or with reference to cosmological principles and concepts of sacred space (Barrett 1990; Garwood 1991; Woodward 2000). At a local scale, however, it is often
difficult to identity particular rationales for decisions about the spatial positioning of the dead or their memorials. The only exception to this is the formation of linear round barrow groups and the ways in which these sometimes respected or referenced earlier monuments, natural features or celestial phenomena (discussed further below). Wider locational and distributional patterns are also elusive, although the concentration of round barrows in topographically-distinctive or highly-monumentalised landscape areas is widely recognised (eg Fleming 1971; Field 1998; Tilley 1998, 177–238; Woodward and Woodward 1996).

In terms of local positioning with respect to landscape topography, it is evident that the HS1 sites share almost no locational characteristics in common. Even in those cases where the geological and terrain contexts are similar, like the sites on the Lower Greensand ridge, there is nothing to suggest that a consistent set of locational criteria were being drawn upon. The Tutt Hill ring ditches were situated on a north-east facing slope overlooking a tributary of the Stour. The ring ditches at Beechbrook Wood, in contrast, were located on the south-west facing side of the same low ridge as the Tutt Hill group. At Saltwood Tunnel, the line of ring ditches traversed the broad top of a spur (the Saltwood plateau), between two dry valleys running from north to south, with a general south facing aspect but with extensive views to the west and east at the respective ends of the linear barrow group. Elsewhere, the Whitehill Road barrow was situated on a gentle north-east facing chalk slope c 150m from the northern edge of a dry valley, the Northumberland Bottom Beaker grave was cut into the east facing slope of a chalkland hill again overlooking a dry valley, while at Cobham the penannular ring ditch was cut into the Thanet beds on the broadly north-facing undulating dip slope of the downs. The only feature clearly shared by all these sites is their relative elevation, allowing fairly extensive fields of view over distant parts of the wider landscape, though again these views appear to have varied according to local/group interests specific to each landscape setting, with no suggestion that they conformed to the same cosmosgraphic principles.

The spatial organisations of the three round barrow groups investigated along the HS1 corridor are also diverse. In two cases, Tutt Hill and Beechbrook Wood (Fig. 3.50), these appear to consist of small nucleated clusters of monuments that lack any obvious spatial order. At Tutt Hill, however, the four ring ditches were distributed across the area of the excavation and may perhaps represent only part of a more extensive funerary monument complex of unknown scale and structure. At Beechbrook Wood, too, it is conceivable that the ring ditches at the north-west end of the excavation could have been part of a larger group extending to the north, although as with Tutt Hill there is no evidence for this. Nucleated clusters of Early Bronze Age round barrows and ring ditches, of diverse scale and monument composition, are widely known throughout Britain (Woodward 2000, 76–8), although very few have been excavated extensively in recent times. The only example in south-east England is the West Heath barrow group in West Sussex (Drewett 1976; 1985), which like the HS1 examples was located in an elevated Greensand ridge position. This ‘barrow cemetery’ consisted of at least nine round barrows dating to the period 2100–1600 BC. The limited dating evidence from these sites leaves the sequences and tempos of monument construction uncertain, although they do suggest an aggregational—perhaps episodic—process of development that lacked consistent rules for determining spatial ordering and positioning.

The barrow group excavated at Saltwood Tunnel is altogether different in character (Fig. 3.51). This consisted of a linear arrangement of five ring ditches (from west to east: C10020, C10082, C10056, W201, W33) and a ‘flat grave’ (C4507) situated about half-way between the two westernmost monuments (C10020, C10082). The

Figure 3.50 Plans of the Tutt Hill and Beechbrook Wood ring ditch groups
possibility that flat grave C4507 was marked by a low mound is strengthened by the wider spatial organisation of the round barrows and graves. The spacing between each pair of monument centres/graves suggests consistent principles in the marking out of appropriate distances between mounds and/or funerary events. At both ends of the alignment these are spaced between 78m and 92m apart: C10055–C4507 (92m); C4507–C10082 (80m); W201–W33 (78m). The distances between those in the central part of the alignment, in contrast, are roughly double the former range: C10082–C10055 (174m); C10055–W201 (168m). This is similar to the widely-spaced alignment of Beaker graves and monuments, c 74–121 m apart, at Radley, Oxfordshire (Garwood 1999c, 304, fig. 9.7). Even more striking is the overall layout of the Saltwood Tunnel monuments. At first sight they appear to form a broadly linear but slightly straggling group of monuments. On closer inspection, however, it is evident that the southern outer edges of each of the three eastern ring ditches, irrespective of their very different overall diameters, fall on a single line, while the northern outer edge of C10020 and the northern side of grave C4507 are positioned on a parallel line just 4m to the south. Only ring ditch C10082 is slightly offset from this southern line, c 3–4m further to the south, although this ‘gap’ could be explained by the former presence of an external bank.

It appears, therefore, that the Saltwood Tunnel round barrows were carefully positioned at regular intervals on either side of a dead-straight ‘corridor’ approximately 4m wide, oriented on an exact east-west alignment in relation to true north (Fig. 3.51). The form and purpose of this corridor is unknown, but some kind of routeway seems by far the most likely explanation. Whilst it is possible that the east-west orientation of the Saltwood Tunnel barrow group is coincidental (1:180 probability), the apparent alignment of other linear round barrow groups on celestial phenomena (Garwood 2003, 60) and wider recognition of the cosmographic structuring of monumental architecture during the later Neolithic and Early Bronze Age with reference to cardinal points (Darvill 1997a), suggests that this may have had particular sacred or cosmological significance. This spatial arrangement may thus have been a deliberate attempt to reify a cosmological scheme in a highly visual and physically-imposing manner—a ‘way of the dead’, perhaps, linked to sunrise and sunset at the equinoxes. At the same time, other kinds of symbolic referencing could well have been invoked through the relative positioning of the dead and their memorials in lineal sequence, perhaps appreciated most forcibly during ceremonial processions that ‘travelled’ along the route. In the course of such encounters with the significant dead, it would have been possible to assert particular relationships.

Figure 3.51  The Saltwood Tunnel linear round barrow group. Upper: plan of the five ring ditches and two inhumation burials (C4507; C14619). Lower: interpretative plan showing the linear structuring of the monument complex, consisting of two short alignments of monuments and burials offset on either side of a dead-straight path or boundary.
between the past, ancestral figures, mythological heroes and present individuals and groups. More generally, such monument complexes would have been ideal media for articulating narratives of dynastic succession and political success (Barrett 1994, 112; Garwood 1999c; 2007a, 37–42).

There are very few parallels for the Saltwood Tunnel round barrow group in south-east England. Three linear ‘cemeteries’ with surviving mounds are known in West Sussex, though none has been subject to recent investigation (Garwood 2003, 51), and there are a few possible examples in Kent (Parfitt 2006b, 49) including several clusters of ring ditches recorded on air photographs in areas such as the Stour Valley (Small 2008) and Thanet (see Bennett 2008, fig. 1.2). The only group investigated in recent times, however, is at Monkton, Thanet, where the excavated ring ditches in Area 9 could be part of a more extended alignment of monuments running SW-NE (ibid., fig. 1.3). It is unfortunate that the dating of the development of the Saltwood Tunnel barrow group is uncertain. Although the inhumation burial in grave C4507, and the Food Vessel-associated inhumation burial at the centre of Ring Ditch C10082, were radiocarbon dated to 2290–1970 and 2200–1940 cal BC (NZA-19886; NZA-19641) respectively (discussed below), there is no dating evidence for construction of any of the other monuments.

Elsewhere in southern Britain the formation of large linear barrow groups consisting of close-set arrays of substantial mounds appears to take place in the period 1900–1600 BC, while the earlier, more widely-spaced alignment of smaller Beaker-associated monuments at Radley can be dated to the period 2400–1900 BC (Garwood 1999c, 304; 2007a; forthcoming). It is very tempting, on the basis of the evidence available, to situate the Saltwood Tunnel monument group between these two forms of linear funerary monumentalism (morphologically, chronologically, and with reference to the long-recognised ‘sequence’ of funerary traditions), and even to see it as a ‘transitional’ type with characteristics of both earlier and later forms (eg wide spacing but with large monuments). This may indeed have some validity, but it is equally possible that the two dated sites with inhumation burials at Saltwood Tunnel represent an early ‘paired’ arrangement of burial events/monuments (quite common in the period 2150–1850 BC: eg Trelystan; Britnell 1982), while the remaining mounds—which lack inhumation burials in pit contexts—were all added at a later date sometime after 1900 BC when burials in shallow pits and on old land surfaces, as well as cremation practices, became increasingly common.

The HS1 evidence also contributes to our understanding of the wider spatial distribution of round barrows in Kent in the late 3rd and earlier 2nd millennia.

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Figure 3.52 The distribution of ring ditches and round barrows in south-east England in relation to the HS1 route. HS1 sites with ring ditches and/or Early Bronze Age burials are numbered: 1. Whitehill Road; 2. Northumberland Bottom; 3. Cobham Golf Course; 4. Tutt Hill; 5. Beechbrook Wood; 6. Saltwood Tunnel
BC (Fig. 3.52), notably the presence of barrow clusters c 1.5km apart along the Greensand ridge (such as Tutt Hill and Beechbrook Wood). This distribution of monument groups is paralleled by the barrow cemeteries situated at intervals of 1.5 to 5km along the Greensand ridge in West Sussex and east Hampshire (Garwood 2003). These have been interpreted as evidence for settlement expansion from the densely occupied chalklands, especially after c 2000 BC, involving the development of local funerary/ceremonial complexes distinct from the ‘linear ritual landscape’ of round barrows along the South Downs (ibid.; Field 1998, 321). The expansion of areas of more sustained occupation, clearance and agrarian farming, achieved in part by the use of funerary monuments to express ideas of belonging and social solidarity, and perhaps even to lay claims to land, has been suggested in other parts of the country during the first half of the 2nd millennium BC such as the West Midlands (Garwood 2007b, 152–4). Whether this was the case in Kent remains uncertain because of the lack of dating evidence and the little understood wider landscape context, especially the apparent absence of round barrows across most parts of the North Downs to the west of the Stour, which contrasts with the dense concentrations of round barrows on the South Downs (Field 1998; Garwood 2003; in prep. b). Even so, the HS1 evidence shows for the first time that significant groups of Early Bronze Age monuments once existed to the south of the chalkland escarpment, offering us a tantalising glimpse of what may have been a much more extensive, large-scale structuring of a ‘sacred landscape’.

The funerary evidence: Chalcolithic and Early Bronze Age burials

The absence of the dead from large geographical and temporal swathes of British prehistory is a striking but little understood feature of the archaeological record: there was plainly no simple translation of living societies into ‘communities of the dead’. Although systematic biases in the recovery of evidence and uneven survival of human remains have obviously had an effect on the known distribution of human remains, only the highly destructive, disaggregative and dispersive nature of most kinds of mortuary treatment and depositional practices can fully account for the ‘disappearance’ of the prehistoric dead (eg through disarticulation, cremation, surface disposal, scattering of remains, river deposition, and so forth). The majority of people who died in the Chalcolithic and Bronze Age were clearly not interred beneath mounds or within built structures (tombs, etc), or even in subsurface contexts such as pits; indeed, for long periods in British prehistory burials of these kinds were rare events if they happened at all. Moreover, what are sometimes described as ‘burials’ on closer inspection are often partial body remnants derived from more complex multi-stage mortuary practices, or the outcomes of votive acts that involved fragments of dead people as symbolic, spiritual or moral resources (Brück 2004; Garwood 2007d).

In this light, attempts made by particular social groups in prehistory to sustain the physical integrity and ‘completeness’ of bodies, to contain, ‘house’ or deposit them formally in pre-prepared objects or graves, and to bury them within/under built structures, were all highly deliberate and carefully contrived social acts. Such practices were clearly exceptional in relation to the ‘normative’ range of mortuary treatment of the dead, which led in most cases to the effective dissolution of bodies and thus their non-presence in the archaeological record. Decisions to bury the dead in this way can only be understood in terms of particular religious and political imperatives discussed and agreed upon by those who undertook the difficult tasks of body management, burial and monument-building. The Chalcolithic and Early Bronze Age mortuary evidence from HS1, therefore, is not limited and poorly preserved only because of the high level of destruction of monuments and other contexts of funerary disposition, but also more importantly because the recorded burials represent rare surviving examples of what were already rare acts of formal deposition and even more unusual acts of monument construction. The HS1

Table 3.4 Chalcolithic and Early Bronze Age burials from HS1 Section 1

<table>
<thead>
<tr>
<th>Burial</th>
<th>Context</th>
<th>Type</th>
<th>Sex &amp; age</th>
<th>Dating evidence and associations</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitehill Road barrow, Grave 42</td>
<td>Secondary pit grave; outer edge of inner ditch</td>
<td>Inhumation</td>
<td>Female, c.25 yrs</td>
<td>1620-1440 cal BC</td>
<td>Bull 2006a, 7-10</td>
</tr>
<tr>
<td>Northumberland Bottom, Pit 1071; Skeleton 1203</td>
<td>Pit grave; base of pit, beneath 1070</td>
<td>Primary inhumation</td>
<td>Female, 26-45 yrs</td>
<td>2120-1780 cal BC Beaker</td>
<td>Askew 2006, 11-14</td>
</tr>
<tr>
<td>Northumberland Bottom, Pit 1071; Skeleton 1070</td>
<td>Pit grave; base of pit, on top of 1203</td>
<td>Secondary inhumation</td>
<td>Male, 26-45 yrs</td>
<td>2280-1980 cal BC Beaker</td>
<td>Askew 2006, 11-14</td>
</tr>
<tr>
<td>Northumberland Bottom, Pit 1071; fill 1069</td>
<td>Pit grave; in upper fill of pit</td>
<td>Secondary inhumation</td>
<td>Child, 4-5 yrs</td>
<td>Undated</td>
<td>Askew 2006, 11-14</td>
</tr>
<tr>
<td>Northumberland Bottom, Pit 106</td>
<td>Isolated pit; burial inside inverted Collared Urn</td>
<td>Cremation</td>
<td>No details</td>
<td>2290-1970 cal BC Collared Urn</td>
<td>Askew 2006, 13</td>
</tr>
<tr>
<td>Saltwood Tunnel C4507</td>
<td>Pit at centre of ring ditch</td>
<td>Inhumation</td>
<td>Female, 25-35 yrs</td>
<td>2200-1940 cal BC Food Vessel</td>
<td>Riddler &amp; Treverthen 2006, 11</td>
</tr>
<tr>
<td>Saltwood Tunnel C10082, Grave 4619</td>
<td>Pit at centre of ring ditch</td>
<td>Inhumation</td>
<td>Male, &gt;50 yrs</td>
<td>2200-1940 cal BC Food Vessel</td>
<td>Riddler &amp; Treverthen 2006, 10-11</td>
</tr>
</tbody>
</table>
burial evidence is summarised by site in Table 3.4, and discussed below in chronological order.

**The Northumberland Bottom Beaker grave**

Northumberland Bottom grave 40557 consisted of an irregular-shaped ovate pit (1071), 1.30m wide and 1.70m long, which contained two adult inhumations in crouched positions, one immediately above the other, each associated with a Beaker vessel (Figs 3.53–4). Preservation of the vertebrae, ribs, scapulae and pelvis of the skeletons was poor in both cases, but neither displayed any indications of disease or other pathology (Askew 2006, 11). In addition, the fragmentary remains of a child aged between 3 and 5 years old were found in the upper fill of the grave (1069). This had been disturbed, possibly by animals, and only 20% of the skeleton survived.

The lower adult burial (1203), probably a female 26–45 years old, placed on the pit floor on her right side with the head to the south, is dated to 2130–1820 cal BC (94.9% probability; NZA-22735). A complete Beaker vessel with faint ‘barbed wire’ decoration was found in an upright position just behind the body, halfway between shoulders and pelvis. This belongs to Clarke’s East Anglian group (1970, 146–52, map 4) and Needham’s Globular class of Beaker vessels (2005, 198–200). The upper tightly flexed adult skeleton (1070), possibly a male 26–45 years old, positioned on his left side with the head to the north, had been superimposed directly on top of the woman. Human bone produced a radiocarbon date of 2280–1980 cal BC (NZA-22736). Sherds representing about 30% of a Beaker vessel were found beside the head, probably placed in front of the face. This was also an East Anglian/ Globular vessel, decorated with horizontal bands of comb-impressed lines and ladder motifs interspersed with...
plain zones (Barclay and Edwards 2006, 17). The dating evidence for these burials places them firmly in the middle phase of Beaker funerary practices (c. 2250–1950 BC), in common with virtually all other Beaker graves in south-east England. This corresponds with Needham’s (2005) ‘fission horizon’ phase during which Beaker ceramic styles, grave assemblages and mortuary practices diversified. This was also a period in which multiple burial events and repeated material re-working of the past, including the dead, became especially prominent features of funerary and monument-building practices (Garwood 2007a).

The mode of body lay-out and orientation of the female burial at Northumberland Bottom, with the Beaker behind the back, has no exact parallels in south-east England and few well-dated comparanda elsewhere. There are no examples in Surrey, while the only burial with a Beaker in that position in Sussex, at Pyecombe, is that of an adult male lying on his left side with his head to the north-west, accompanied by a dagger and wristguard (C Butler 1991; Garwood 2003, fig. 5.5). In Kent, the only clear parallel is the burial of a slightly-built adult at Manston, Thanet, dated to 2190–1880 cal BC (Perkins and Gibson 1990), although the ‘male’ posture of the body on its left side with its head to the north contrasts with the Northumberland Bottom female. Moreover, the few examples of well-dated burials with Beakers in this position elsewhere in southern Britain, notably at the Gene Function Centre, Oxford (Grave 204, Boston et al. 2003), the secondary grave at Ravenstone, Buckinghamshire (D Allen 1981), Grave 2 at Risby, Suffolk (Vatcher and Vatcher 1976), and the primary burial at Gravelly Guy X6, Oxfordshire (Lambrick and Allen 2004, 51–61), all vary in terms of sex, orientation, left/right side posture, grave goods and date. The same lack of direct parallels applies to the upper male burial at Northumberland Bottom, the only radiocarbon-dated example being the articulated inhumation in Monkton grave 751, which lay on its right side with head to the south (discussed further below; Clark and Rady 2008), although there are several undated Beaker graves of this kind including two in Sussex at Heathy Brow and Shoreham (with heads to the north but lying on their right sides: Garwood 2003, fig. 5.5). The great diversity of Beaker graves may well disguise consistent strategies in the lay-out of bodies and artefacts relating to categorical distinctions based on gender, cultural identity, status and so forth, but these may have been expressed in such varied ways—regionally and over time—that significant patterns and meanings remain elusive.

Figure 3.54 The Northumberland Bottom Beaker burials, viewed from the north. Left: the lower female burial; the Beaker vessel placed at the back of this individual can be seen in the right-hand photograph. Right: the upper male burial with a broken partial Beaker vessel lying in front of the face; the skull of the lower burial can be seen at the far end of the grave, immediately beneath the feet of the upper burial.
Sequences of burials within single grave pits are a fairly common feature of Beaker mortuary practices in Britain as a whole (Gibson 2007, 59–61), especially during the period 2150–1800 BC (Garwood 2007a; 2007b, 147, fig 10.4). Examples in south-east England, however, are rare. There are no similar burials in Surrey or Sussex, and there are only three well-documented examples of Beaker burial sequences in Kent, two of which can be radiocarbon-dated to the same period as the Northumberland Bottom burials, while the third is probably also contemporary on the basis of artefact associations. The complex series of seven (mostly partial and/or disarticulated) burials in the central intercutting pit group at South Dumpton, Broadstairs, associated with a Food Vessel and Beaker, has a series of radiocarbon dates spanning the period 2140–1730 cal BC (Perkins 2004a, 77–9). At Monkton, Thanet, a pile of disarticulated skeletal material at one end of ‘flat grave’ 751, comprising the partial remains of at least three individuals dated to 2290–1920 cal BC, appears to have been ‘cleared’ to make way for the presumed secondary crouched burial of an adult male, dated to 2180–1890 cal BC, placed at the other end of the grave and associated with a low-bellied ‘S’-profile Beaker (Clark and Rady 2008, 15, fig. 1.9). Adjacent to Monkton 751 was another ‘flat grave’, 6371, containing the undated, spatially-separated burials of an adolescent and child, the latter possibly but not definitely a secondary insertion in the grave pit and associated with a Short-necked Beaker and a bronze bracelet that probably also date to c 2200–1900 BC (ibid., 16–17).

These burials suggest deliberate attempts were made to ‘revisit’ the dead and in at least one case partially curate some of the earlier corporeal remains. These practices did not, however, involve the direct superimposition of ‘whole’ bodies as seen at Northumberland Bottom, a practice which is most closely paralleled by several Beaker graves in Wessex (Fig. 3.55). These include Shrewton 24, with two adult male burials, the lower one—exposed by the recut of the grave pit for the second burial—radiocarbon-dated to 2310–2020 cal BC (94% probability; BM-2516) (Green and Rollo-Smith 1984, 285–6), and Chilbolton, Hampshire, where the complete but partially disarticulated lower adult male burial was again revealed by the insertion of the second adult male burial, imprecisely dated to 2470–1980 cal BC (2340–2040 cal BC at one standard deviation) (Russel 1990).

The Northumberland Bottom burials are especially intriguing in this wider context because they may reveal complex kinds of mortuary treatment and signification, involving not just the assertion of genealogical relationships but also the referencing and physical ‘presencing’ of the long-dead in ways that may have foregrounded mythic narratives or used ancient corporeal substances, including bodies, as iconic media. It is evident that the radiocarbon dates from the two burials not only contradict the expected temporal sequence, with the upper burial having the earlier date, but are also separated chronologically (with age ranges not overlapping at all at one standard deviation: 2210–2040 cal BC/2020–1900 cal BC). There seems no reason to doubt the reliability of the determinations (Askew 2006, 11), although additional confirmatory dates would resolve any uncertainty. It is possible, therefore, that the upper male body had been preserved/stored in some way or buried for a lengthy period before being exhumed, either from a grave elsewhere or from an original position at the base of the Northumberland Bottom grave pit, and then ‘re-buried’ on top of the lower female body. This is supported by the lack of evidence for a re-cut of the grave pit to receive the second burial, which may indicate that this was placed in the grave at the same time as the lower body. It is also apparent that the upper burial was in a more ‘disturbed’ and partially disarticulated condition in comparison with the lower burial, and that it was accompanied by only parts of a broken Beaker in contrast with the complete vessel placed with the female body. The female-male burial sequence is unusual, as males usually (although not exclusively) have primary positions in Beaker graves (Mizoguchi 1993); the reversed ‘sequence’ in this case may in fact have been a particular consequence of mortuary practices that involved the manipulation and redeposition of an ancient body and an associated—partly fragmented—pottery vessel.

There is certainly no question that things of the past, including the remains of dead people, figure prominently in Beaker graves of the period 2150–1800 BC (cf. Garwood 2007a; Healy and Harding 2004; Woodward 2002a). Whether ‘heirlooms’ with significant histories or biographies, relics (like those in medieval saints’ shrines) or powerful ancestral substances, ancient objects are recognised increasingly in funerary deposits of the late 3rd and early 2nd millennia BC. The presence of disarticulated human bones alongside articulated bodies in Beaker graves thus appears to have been far more significant than a matter of simple displacement of skeletal remains. For example, at Raunds Barrow 6, Northamptonshire, the disarticulated remains of parts of two individuals, radiocarbon-dated to 3360–3030 cal BC, were placed beneath the richly-equipped central male Beaker burial dating to 2130–1820 cal BC (Harding and Healy 2007, 96–7). In this case, ancient human remains appear to have been retrieved deliberately in order to re-inter them in association with the newly dead.

The discovery of mummified bodies at the Bronze Age Hebridean settlement at Cladh Hallan, South Uist, Scotland, including individuals who died in the 17th to 15th centuries BC but were finally buried in the period 1300–1000 BC (in one case forming a composite ‘body’ comprised of parts of three different people; Parker Pearson et al. 2005), has prompted speculation about the possibility of body preservation more widely in the British Bronze Age, especially in the case of tightly-flexed corpses that must have been bound and probably wrapped to maintain their constricted postures (ibid., 543–4). The process of mummification at Cladh Hallan is uncertain, although both air-drying and bog immersion, allied with probable evisceration to reduce rapid decomposition, have been proposed. Whether the
Figure 3.55 Comparative burial sequences (shown in plan and section) of superimposed burials in Beaker graves in southern Britain. Top: Chilbolton, Hampshire (Russel 1990, fig. 2); Middle: Shrewton 24, Wiltshire (Green and Rollo-Smith 1984, fig. 16). Bottom: Northumberland Bottom, Kent (Askew 2005, figs. 4, 5; the section is a schematic reconstruction based on the site record).
upper male body at Northumberland Bottom was originally buried within the grave pit or not, it is possible that it had undergone a similar process of preservation and tight-bound wrapping, in such a way that it was possible to move and redeposit the corpse in a more or less complete form onto the body beneath, effectively coating or even ‘adorning’ the dead woman (as a kind of emblematic or amuletic ‘grave good’ perhaps). If so, this may have served to evoke memories or make statements about personal or genealogical relationships, identities and origins, or provided a source of ancestral guardianship, while also conveying impressions of moral qualities and values concerned with themes such as vitality, protection and sanctification.

The partial child skeleton in the upper fill of the Beaker grave is also difficult to account for in terms of conventional expectations about ‘burial’ practices. There was no evidence for a recut for the insertion of the body, and the possible ‘disturbance’ surmised to account for the incompleteness of the skeleton was not recognised before excavation (Askew 2006). It is more likely, in fact, that the child’s body or body parts were deliberately incorporated in the grave as it was backfilled. The presence of child remains in the fills of adult graves is a common feature of funerary practices in this period, when child ‘burials’ and deposits of partial bodies proliferated in a wide range of mortuary contexts, in contrast with the much rarer occurrence of child burials in earlier and later periods (Garwood 2007d, fig. 7.4). The Northumberland Bottom example is thus consistent with wider patterns in the mortuary treatment of juveniles at this time.

Although the burials of children, like those of adults, may well have been occasions for expressions of intense grief as well as anxiety over losses of reproductive potential, it is also possible that they had other kinds of symbolic significance. The ways in which younger children, in particular, were incorporated in graves were very similar to modes of artefact deposition, often being placed beside adults like grave goods or within grave fills (Garwood 2007b, fig. 10.4; Garwood 2007d). This contrasts significantly with the burials of older children who were treated more like adults. Indeed it is possible that young children, who had not yet achieved ‘grown-up’ identities or fulfilled productive social roles, and were thus embodiments of unrealised potentiality, were transformed in the course of mortuary rituals into sources of vitality or fertility, especially where life itself was perceived to be a ‘limited resource’ that had to be recycled (ibid.; cf. Bloch and Parry 1982). The presence of the child’s bones in the Northumberland Bottom grave may not, therefore, have been the result of an act of burial as such, but rather the votive or sacrificial investment of powerful corporeal substances as part of a more complex ritual performance intended perhaps to propitiate or ‘feed’ supernatural forces, ancestors or deities on whom human life depended.

The Saltwood Tunnel inhumation burials

The two radiocarbon-dated inhumation graves at Saltwood Tunnel, both from the 22nd–21st centuries BC and thus broadly contemporary with the Northumberland Bottom burials, provide a useful reminder that Beaker graves after c 2200 BC cannot be treated in isolation, as if they were somehow disengaged from the other traditions of funerary practice that appeared throughout Britain from this time. Although the cultural significance and socio-political rationales underlying these diverse modes of funerary deposition remain little-understood, it is clear that those performing burial rituals made strategic choices about body treatment and the provision of grave goods in ways that must have realised or conveyed specific meanings to those participating in funerals.

Grave C4507, located halfway between Ring Ditches C10020 and C10082, was a large sub-oval pit aligned east-west, 2.15m long and 1.15m wide. This contained...
the burial of an adult, probably a female about 25–35 years old, crouched on her right side with the head to the east (Fig. 3.56). The relatively well-preserved skeleton (c 30% surviving) was radiocarbon-dated to 2290–1970 cal BC (NZA-19886), which makes it broadly contemporary with the central Food Vessel grave of barrow C10082 to the east (discussed below). The spatial position of Grave C4507, discussed in the previous section, suggests it was a significant funerary event at a location that referenced and/or was referenced by the impressive round barrows nearby. Unaccompanied inhumation burials appear to have been common throughout the period c 2500–1800 BC, although it is important to note that there has been no sustained comparative analysis of the precise chronology, funerary contexts or spatial patterning of burial acts of this kind, and it is quite possible that their frequency and cultural and political significance varied over time. The spatially isolated person-focused single-event burial in the substantial grave pit at Saltwood Tunnel, for example, can be contrasted with far more common unaccompanied inhumations in later secondary contexts at round barrow sites (especially in the period 2100–1800 BC; Garwood 2007d), where the meaning of the burial may have been more bound up with the collective significance of the monument rather than the persona of the dead individual.

Grave C4619, at the centre of Ring Ditch C10082, 78m to the east of Grave C4507, is very different in terms of the funerary artefact association and the large-scale act of monumentalisation that followed the burial event, both of which are extremely unusual in this period in southeast England. The grave itself consisted of a large sub-rectangular vertical-sided pit, aligned almost north-south, containing the skeleton of an adult male aged over 50 years old, radioacarbon dated to 2200–1940 cal BC (NZA-19641). He lay within a wooden coffin or wood-framed bier, on his left side with his head to the north, facing east, accompanied by a Food Vessel placed on its side just above and behind the head (Fig. 3.57). This individual had a healed break of his right fibula, but otherwise showed no sign of disease or injury (McKinley 2006b). The substantial grave pit, 2.7m long, 1.30m wide and 0.85m deep, and the very large encircling ring ditch which presumably provided material for a large mound superstructure, suggest considerable social effort and a conscious attempt to affirm the long-term significance of the dead person and the group to which he belonged.

The Food Vessel is a bipartite vase with a slightly carinated shoulder or low cordon around the upper-middle part of the vessel body, above which a near-vertical ‘neck’ is decorated with an incised triple-line diamond pattern. The internally beveled rim is finely decorated with an outer line of pinched finger-tip impressions, and a line of angled finger-tip impressions along its pronounced inner lip which viewed from above has the appearance of twisted cord. The lower part of the vessel

![Figure 3.57 Saltwood Tunnel Grave C4619: grave plan and Food Vessel](image-url)
is undecorated, tapering towards a rounded and slightly protruding foot at the base. Whilst bipartite Food Vessel vases are common, most have biconical or shouldered forms and are richly decorated, usually with impressed rather than incised decoration, unlike the Saltwood Tunnel example. Indeed, a survey of the existing corpus (the only one at a national scale still being Abercromby 1912), museum catalogues (eg Annable and Simpson 1964; Kinnes and Longworth 1985), and major regional studies of Food Vessels and their funerary contexts in Ireland (Brindley 2007; Ó Riordáin and Waddell 1993; Waddell 1990), Scotland (Sheridan 2004), northern

Figure 3.58 Food Vessel and Beaker comparanda for the Saltwood Tunnel Food Vessel and its incised lozenge decorative motif: 1. Saltwood Tunnel Grave C4619, Kent (Riddler and Trevarthen 2006, fig.11); 2. Cossington Barrow 2, Leicestershire John Thomas 2008, fig.32.6); 3. Hodgeton Farm, Inverkeilor, Angus (Coutts 1963-64, fig.2); 4. Skateraw Farm, Innerwick, East Lothian (Cow 1983, no. 23); 5. Redden, Kelso, Scottish Borders (Cow 1983, no. 67); 6. Huggate & Warterwold 264, Yorkshire (Clarke 1970, illus.1017); 7. Sidmouth, Devon (Clarke 1970, illus.1015); 8. Linlathen, Angus (Clarke 1970, illus.1018); 9. Lilburn Hill, Northumberland (Clarke 1970, illus.990); 10. Tara burial 35, Co. Meath (Brindley 2007, fig.106.5); 11. Wilsford 62, Wiltshire (Clarke 1970, illus.1036); 12. Worth Matravers, Dorset (Clarke 1970, illus.1034)
Britain (Cowie 1978), north-east England (Gibson 1978), the Peak District (Manby 1957), Yorkshire (Mortimer 1905; Pierpoint 1980; M Smith 1994), as well as particular categories such as handled pots (Manby 2004), reveals no direct parallels for this vessel anywhere (Fig. 3.58). What it does share, however, with a number of Food Vessel vases and, notably, several Beakers, are elements of similar decorative motifs and design schemes, and some features of vessel form and moulding, which provide a broad context for the making and significance of this (currently) unique object.

The most similar vessels in terms of body shape, although smaller, are a number of handled bipartite Food Vessels with pronounced body carinations, incised zig-zag decoration and often bevelled rims, which are found mainly in eastern England, including examples from Caythorpe, Lincolnshire, and Great Chesterford, Essex (Manby 2004, figs 75.5–6, 9). Also similar in form are several wider/shorter bipartite Food Vessels with straight-sided upper bodies or necks, either undecorated or with finger-nail or cord impressions (especially around the rims and mid-upper body cordons/carinations), some of which also have incised decoration. These occur mainly in Scotland (Burgess 1980, fig. 3.1.3), Yorkshire (M Smith 1994, figs 17.4, 25.3–4, 44.1) and the Peak District (Manby 1957, figs 5.A7; 6.A33), together with a few examples in southern England including several at Radley, Oxfordshire (Barclay 1999a, 101, 122–7; figs 4.54, 4.63, 4.64). One of these was found with a child burial (Grave 605) dated to 2300–1870 cal BC (93.6% probability), while a taller undecorated vessel was associated with an adult female (Grave 4970) dated to 1950–1690 cal BC. The only other Food Vessel from a radiocarbon-dated inhumation burial with features reminiscent of the Saltwood Tunnel example was found at Hodgeton Farm, Inverkeilor, Angus (Cuotts 1963–64, 159): this is similar in size and profile and has rather crude double and triple incised chevrons on the lower part of the vessel which in places form rough diamond motifs. This burial is radiocarbon dated to 2040–1870 cal BC (93.7% probability; SUERC-16324: Neil Wilkin pers. comm.). All of these pots, however, only partly resemble the Saltwood Tunnel vessel while differing markedly in other respects. The same observation applies in the case of the small number of Irish Food Vessel vases that have relatively tall bipartite forms with near-vertical upper sides (eg Ó Riordáin and Waddell 1993, cat. 588, 610), none of which is associated with an inhumation burial (cf. Waddell 1990, 10).

More significant, perhaps, is the occurrence of the Saltwood Tunnel vessel’s distinctive incised large diamond motif (see Fig. 3.58) on a number of Beakers (Clarke 1970, nos 159.1 (illus.1015), 687 (990), 1034 (218), 1177 (1036), 1520 (1018), 1637 (1017)), a handled Food Vessel (Huggate and Warterwold 264; Clarke 1970, illus. 1087), a Food Vessel associated with an urn and cremation in Tara burial 35, Co. Meath (Brindley 2007, 89), and possibly one of the Food Vessels from Ardnav, Islay (Sheridan 2004, fig. 87). Several more Beakers and Food Vessels have similar multi-line incised open chevrons and triangles (without in-filling decoration) arranged in otherwise undecorated horizontal panels (Clarke 1970, nos 1654 (illus.1013), and 1635 (1014)), and there are a few vessels with incised single line diamond motifs, such as the Food Vessel from Cossington Barrow 2, Leicestershire (John Thomas 2008, fig. 28). None of these pots is well-dated, although associations with Milton and Butterwick flat riveted daggers suggest a date range in the period c 2200–1900 BC (Gerloff 1975, 42–63; Needham 1996, 130), which is consistent with the radiocarbon date from the Saltwood Tunnel burial. Also broadly contemporary is a secondary cremation burial at Gallibury Down, Isle of Wight, radiocarbon-dated to 2140–1910 cal BC (Brindley 2007, 368), associated with an Armoricain single-handled vase à anse with opposed multi-line incised chevrons comparable to those on British Beakers and Food Vessels (Tomalin 1988, 208–9).

The majority of the vessels with these kinds of incised decoration are found in coastal and near-coastal areas around Scotland, eastern England and along the Channel, but are far rarer inland (eg there are no examples in west-central England or the Peak District) and there is none in western Britain. It is possible, therefore, that this decoration expressed a certain kind of identity or origin, a shared aesthetic that transcended local cultural repertoires, and/or participation in extensive networks of exchange that were articulated mainly through eastern maritime interactions. Communities in east Kent in the late 3rd millennium BC were well-situated geographically to take full advantage of a sea route that followed the North Sea and Channel coastlines. Indeed, it may be no coincidence that the Saltwood Tunnel grave was positioned on a ridge below the chalk escarpment with commanding views over the sea just 3km to the south. This interpretation accords with evidence for the coastal exchange of artefacts, specific aesthetic/design features and materials at this time, notably Whitby jet which occurs widely in the form of conical buttons and rarer pulley rings and disc bead necklaces in Beaker, Food Vessel and dagger graves from Scotland to Wessex (Baker et al. 2003, 102–3; Sheridan 1999, 55–7). In Kent, the Beaker grave at Manston, Thanet (with a conical V-bored jet button, dating to 2140–1820 cal BC: Perkins and Gibson 1990), and—a few kilometres further west—the undated Monkton Grave 3033, containing a necklace of 217 tiny annular jet beads (Bennett et al. 2008, 19–21, fig. 1.11), both in locations with views of the sea, are good examples of this pattern of long-distance cultural and material transmission. Although this may well have been a period of ‘relative cultural insularity’ preceding the emergence of a Channel/southern North Sea ‘maritamy’ (a sphere of ‘high-flux’ maritime interaction; Needham 2009) in the Bronze Age, the maritime movements of people, objects and ideas in the preceding two centuries appears to have been considerable and probably as significant locally for constructing social identities as those later in the Early Bronze Age.

The Saltwood Tunnel burial is also important in relation to the wider presence and character of Food
Vessel ceramics and graves regionally across southern Britain. It certainly represents a major addition to the known record of such graves in south-east England. There are only two other Food Vessel burials in Kent, both in Thanet, at South Dumpton (Burial 3: not fully published; Perkins 2004a, 77–9), and Lord of the Manor I Grave 6 (Macpherson-Grant 1977, 18), while definite examples of Food Vessel graves are lacking altogether in both Sussex or Surrey (although a small number of pots have been found without burials: Musson 1954, cat. 200; Grinsell 1987, 5–6; Needham 1987, 103). Further west, two complex male graves with near-identical biconical Food Vessels associated with flat riveted daggers, in both cases covered by substantial mounds, are known in Wessex at Waltham, Hampshire (Ashbee 1957), and Sutton Veny, Wiltshire (D Johnston 1977/78). Neither of the Food Vessels, however, is like the Saltwood Tunnel example and the body postures, grave lay-outs and wooden containers or biers differ in each case.

These seem to be more general features of primary Food Vessel inhumation burials in southern Britain: not only are they exceptionally rare and diverse, but where they do occur they tend to be unusually well-equipped, and associated with relatively complex grave forms and impressive monumental architecture, such as the Saltwood Tunnel, Bishop’s Waltham and Sutton Veny examples, and the child burial at the centre of Cossington Barrow 2, Leicestershire (John Thomas 2008, 23–5). In contrast, the majority of Food Vessel-associated inhumation and cremation burials in Wessex and other parts of central and eastern England are secondary interments at multi-phase round barrows, consisting mostly of children and occasional adult females but only very rarely males (eg in Dorset, at sites such as Frampton 2, Kingston Russell 6g, Long Crichel 5, and Down Farm pond barrow). Where dating evidence is available these probably all date to the period c 2000–1700 BC.

The position of the pottery vessel above and behind the head of the Saltwood Tunnel burial is also revealing. Although detailed studies of body posture and artefact placement remains rare, it is evident that this specific spatial arrangement is unknown in Food Vessel graves in Ireland (Waddell 1990), very rare in southern England and the Peak District, and is only relatively common in east Yorkshire (Tuckwell 1975, 108–9, fig. 8b) and eastern Scotland (eg in Fife: Wilkin 2009). Perhaps even more striking, given the wider ceramic associations of incised multi-line diamond motifs, is the prevalence of the behind-head vessel position among the Beaker graves of the same eastern regions of Britain (ibid.; Tuckwell 1975, fig. 8a). It is also notable that the arrangement of the Saltwood Tunnel body on its left side, whilst exceptionally rare among male Food Vessel burials, is the most common form of male body posture in Beaker graves in eastern Britain (ibid., figs 3, 4). This seems to emphasise again not only the eastern connections of the Saltwood Tunnel burial, but also its close affinities to contemporary Beaker funerary practice and aesthetics. This point is perhaps reinforced still further by the broadly north-south orientation and left-side postures of most of the adult male Beaker burials in Kent, including the Manston example (Perkins and Gibson 1990) and an earlier grave at Margate, where the Beaker was also placed at the back of the man’s head (Hart and Moody 2008, 169, fig. 2).

Grave C4619 thus provides important insights into the form and character of very rare Food Vessel burials in southern Britain, and into the way that early burials of this kind—both in this region and more widely—may have owed as much to Beaker precedents as to an emergent mode of burial treatment involving a novel ceramic style. Food Vessels and their funerary placement are often believed to represent an ‘indigenous’ cultural response opposed to Beaker-related practices, but the Saltwood Tunnel evidence suggests far more complex kinds of social agency and signification. In some areas, at least, Food Vessels appear to have been presented in burial acts that emulated those in earlier/contemporary Beaker graves, with ceramic objects that embodied decorative motifs that were either inspired by Beaker referents, or transcended Beaker/Food Vessel ‘oppositions’ as part of a more extensive cultural repertoire of ceramic and funerary aesthetics shared by communities that emphasised maritime interactions and perhaps syncretic modes of cultural representation rather than exclusive identities. The prehistory of Beaker/Food Vessel cultural relationships is yet to be written—and our understanding of the ‘place’ of Food Vessel graves in the funerary landscapes of southern Britain is especially obscure—but the important evidence from Saltwood Tunnel suggests that this relationship may be pivotal for understanding the particular temporalities and significance of change in funerary representation at the end of the 3rd millennium BC.

The Northumberland Bottom Collared Urn burial

The only definite Early Bronze Age cremation burial from HS1 was found beneath an inverted Collared Urn at Northumberland Bottom (Pit 106), in a low-lying area on the side of a dry valley to the north of Hazells Road Farm, 1.65km to the north-west of the Beaker grave. The cremated remains were highly fragmented and decayed, and it was impossible to determine the number, sex or age of the individual(s) represented (Askew 2006, 13). The original landscape context of deposition is uncertain, although the burial appears to have been isolated with no indication of monuments or contemporary occupation in the vicinity. The upper part of the vessel was probably straight-sided but only part of the collar and a fragment of the neck of the urn survived, decorated with cord-impressed filled triangles and horizontal lines, a type of decoration not previously recorded in Kent (Barclay and Edwards 2006, 17). These features are consistent with Longworth’s Secondary Series South Eastern style (1984), though this typology does not provide a guide to dating (for a recent review of Collared Urn typochronology, see Law 2008). Collared Urns are still rare in Kent (Champion 1982, 32–4; 2007, 93; Longworth
1984, 216–17), and Surrey (ibid., 274; cf. Needham 1987), while more common in Sussex (ibid., 195–7, 275–7; Garwood 2003). Whether this geographical variation reflects cultural differences or uneven fieldwork is uncertain. The Northumberland Bottom example, therefore, is a noteworthy if rather uninformative addition to the regional corpus.

The Whitehill Road inhumation burial

The discovery of an inhumation burial with an amber necklace in Grave 42 at Whitehill Road round barrow (in a secondary context; Bull 2006a, 7–10) is of considerable significance nationally as well as more widely in northwest Europe. The associated radiocarbon date of 1620–1440 cal BC (NZA-22740; from human bone fragments) places the burial in the late Early Bronze Age or Middle Bronze Age, when inhumation burial practices and the provision of grave goods were both rare, not only in Britain but also in most maritime continental regions (with the notable exception of Denmark). The small sub-rectangular grave, 1.3m long and 0.75m wide, oriented north-west to south-east, contained the skeleton of a gracile individual, probably female, about 25 years old (Fig. 3.59). The body lay in a flexed position on its right side, with the head to the north-west, accompanied by at least 21 amber beads (17 complete and four fragmentary) in the area around the neck and shoulders, almost certainly buried originally as a complete stringed necklace around the woman’s neck.

The necklace (Fig. 3.60) includes one large ovate discoidal bead, 26 x 23.5mm in diameter, with a central perforation (redrilled off-centre), together with 20 circular/
ovate disc beads (in Beck and Shennan’s typology, all of type 1B except for one borderline type 7B: 1991, 53, 60, fig. 4.1, tbl. 4.1). It is likely that these were arranged in graduated sequences with decreasing bead sizes on either side of the central large pendant bead. The beads show signs of wear and may have been in use for some time before deposition. The amber is probably ultimately of Baltic origin (Keily 2006b), though whether it reached Britain in an unmodified form through exchange or by marine erosion and transportation processes, or as one or more sets of worked beads either as ‘trade’ items or as personal possessions worn or carried by a traveller, craftworker or raider, is unknown.

There is no direct parallel for this necklace in any British Chalcolithic or Bronze Age funerary context (Beck and Shennan 1991). Most Early Bronze Age necklaces with amber beads fall into three broad categories: (i) single-strand full amber necklaces consisting of spherical, oblate, quoit-shaped and/or ‘pestle-shaped’ beads, sometimes with pendant rings; (ii) multi-strand full amber crescentic necklaces with spacer-plates; and (iii) single-strand composite necklaces comprising beads made from a multiplicity of materials, including amber, jet, lignite, shale, faience, stone and bone. Categories (i) and (ii) belong broadly to the period c 1900–1750 BC and are often associated with ‘Wessex 1’ burials, while category (iii) necklaces generally appear to be later, belonging mainly to the period c 1800–1600 BC and often associated with ‘Wessex 2’ style burials. In nearly all cases these necklaces have been recovered, unburnt, from beneath, within or beside cremated human bone deposits. It is apparent that the Whitehill Road necklace is thus different in every respect from Early Bronze Age examples (contra Keily 2006b, 6). Moreover, finds of amber in contexts dating to the 16th–13th centuries BC are exceptionally rare, with only five instances noted by Beck and Shennan (1991, 99–101), none of which includes more than three beads. The conclusion drawn, however, that amber ‘played scarcely any role in the Middle Bronze Age’, seems over-stated: amber beads may well have been in widespread use as personal/dress ornaments but simply not normally deposited in funerary or hoard contexts.

The closest parallel for the Whitehill Road find in Britain is the 16-bead amber necklace from a Late Bronze Age hoard found in a stream bank at Llangwylllog, Anglesey (Beck and Shennan 1991, 101–3, 193, fig. 11.23.2), associated with jet beads, jet and stone rings and bronze objects including tweezers, a bracelet and harness fittings. This assemblage can be fairly reliably
dated to the 8th–7th centuries BC on the basis of the metalwork associations. The Llangwllog necklace, like that from Whitehill Barrow, has a large central rounded annular bead bordered by small, more angular, annular beads that were probably arranged originally in a size-graded sequence. It is possible, given that amber objects could have been curated as ancestral heirlooms or insignia of rank or identity over long periods of time, or even recovered from ancient deposits and re-used, that the Llangwllog beads were originally made and assembled as a set during the Middle Bronze Age.

It is also difficult to find parallels for the Whitehill Road grave in terms of body treatment, necklace association and site context. The closest, at least chronologically, is the recently discovered Middle Bronze Age inhumation (c. 1530–1430 cal BC) of a 14–15 year old adolescent, possibly male, found with an amber necklace of over 90 beads in a shallow grave pit at Boscombe, Wiltshire (Barclay 2010). Isotopic evidence suggests this individual grew up in a warmer environment far from the Wessex chaklands, possibly in far south-west Britain but more likely in southern Europe. Other examples of secondary inhumation burials at round barrow sites with composite necklaces that include amber beads are also all from Wiltshire, including Inhumation 2 at Collingbourne Ducas 5 (Snail Down XXII; N Thomas 2005, 124–5), and Interment 3 at Shrewton 5j (Green and Rollo-Smith 1984, 273–5; cf. Woodward et al. 2005, 49–50). Neither of these burials is radiocarbon dated but the composite forms of the necklaces are similar to those found with cremation burials of the 18th and 17th centuries BC. The only other example of an amber necklace associated with a Bronze Age inhumation was found in a later flat grave (3058) at Easton Lane, Hampshire, radiocarbon-dated to 1300–750 cal BC (Beck and Shennan 1991, 155, fig. 11.4.5; Fasham et al. 1989, 28). This had 27 type 1A/1B amber beads similar to the smaller examples from Whitehill Road.

There are no parallels at all for the Whitehill Road burial and its accompanying necklace in south-east England, while funerary practices in the region more generally during the Early-Middle Bronze Age ‘transition’ are little understood. Although concentrations of Chalcolithic and Early Bronze Age ‘rich’ burials containing exotic and/or rare objects and materials (including gold, jet, amber and faience) have been recognised in east and north Kent and Sussex (Champion 2005; Garwood 2003), these bear only remote comparison to the far more dense clusters of such burials in Wessex. Moreover, the relatively rare, diverse and spatially scattered ‘rich graves’ of south-east England were products of several distinct kinds of funerary representation over a period of at least 800 years, suggesting only occasional and mostly disconnected burial events rather than sustained traditions of practice.

Only three other sites in the region have produced Early or Middle Bronze Age amber finds, of which only one is definitely funerary in character. Fragments from a dagger pommel and a pendant were found in disturbed contexts in the Early Bronze Age mound at Ringlemere, Kent (Needham 2006a), and a small fragment of an spacer plate from an Early Bronze Age necklace was found in a secondary context at Kingsborough Farm, Sheppey (Alistair Barclay pers. comm.). Only the famous amber cup from Hove in West Sussex, found in a tree-trunk coffin, formed part of a funerary assemblage (Garwood 2003, 53). The character and date of the Hove Barrow burial, however, are open to alternative interpretations: it is unclear whether this was an inhumed body or a cremated bone deposit, while suggested dates—ranging from 1750–1550 BC (Needham: 2006c, 60–1), to the late 16th or early 15th century BC (supported by a radiocarbon date of 1610–1380 cal BC from the coffin)—remain equally possible. Other inhumation graves in the region that can be dated to the mid-2nd millennium BC are extremely rare, although these include the burial of a woman with a Snowshill dagger at Chanctonbury, West Sussex (Ratcliffe-Densham 1968), dating to c 1700–1500 BC (cf. Needham 1996, 132–3).

Cremation burials contemporary with the Whitehill Road grave also appear to be rare, the only well-dated example nearby being the burial of a woman beneath an inverted Wessex Biconical Urn at Wouldham, Kent, radiocarbon dated to 1870–1620 BC (Cruse and Harrison 1983; Cruse 2007).

More widely, however, it is evident that amber beads of diverse kinds occur in Middle Bronze Age contexts in many parts of central Europe, most notably in female graves in Tumulus Culture cemeteries in areas such as southern and eastern Germany, Bohemia and western Poland (Gimbutas 1965, 284–90; Kristiansen and Larsson 2005, 234). These finds include single-strand necklaces with graduated bead sizes not unlike the Whitehill Road example, though most of the beads tend to be smaller with more angular edges: eg in Grave 2 at Ebingen in Schwabia (Pirling et al. 1980), and in Mound 4 Interment 3 at Hohen Feld, Stade, in Lower Saxony (Wegner (ed) 1996, 295). Amber beads are surprisingly far rarer in northern Europe, especially in regions such as Denmark and the Baltic littoral where most Bronze Age amber is assumed to have originated (for example, there are very few examples from Danish oak coffin graves of the 16th and 15th centuries BC: Randsborg 2006, 27). Indeed, it is possible that the ‘value’ of Baltic amber for funerary display in the Middle Bronze Age increased significantly the further away it was from its source areas.

In this context, it is striking that the closest parallels for the Whitehill Road grave occur in Drenthe in the northern Netherlands (Fig. 3.61), where there are several examples of amber necklaces in secondary inhumation graves at round barrow sites, notably Emmerdennen Tumulus 11, Kamperesche Tumulus 2, Weerdinge Tumulus 2 (de Paaschberg), and Hijken Tumulus 9 (J Butler 1990). These burials belong to the MBA ‘B’ phase in the Dutch Bronze Age sequence, traditionally dated to c 1500–1100 BC (ibid; van den Broeke et al. 2005, 29–31, fig. 1.10), although a recent reassessment of the radiocarbon chronology suggests that mounds with post circles—a feature of many MBA ‘B’ barrows—were mainly built in the period c 1650–1300 BC (Lanting and
Figure 3.61 Secondary female 'rich graves' with amber necklaces in the Netherlands in comparison to Whitehill Road Grave 42. Top: Emmerdennen tumulus 11, Drenthe (J Butler 1990, fig.5). Middle: Weerdinge Tumulus 2 'de Paaschberg', Drenthe (J Butler 1990, fig.8). Bottom: Whitehill Road, Kent (Bull 2006b, figs.4, 5). Inset: distribution map of the Dutch sites mentioned in the text in relation to Whitehill Road: 1. Emmerdennen tumulus II; Kamperesche Tumulus 2; 3. Weerdinge Tumulus 2 (de Paaschberg); 4. Hijken Tumulus 9
van der Plicht 2001/2, 189-98). None of the graves with amber necklaces has been directly dated, but the evidence from Dutch Middle Bronze Age cemetery barrows indicates short sequences of secondary burials over a few generations after initial construction. It is likely, therefore, that the burials with amber necklaces in the Netherlands date broadly to the same period as the Whitehill Road grave. Although the Dutch necklaces vary in their bead forms, sizes and likely arrangements, they mainly comprise combinations of small annular beads with a small number of larger annular or disc-shaped beads. The example from Weerdinge Tumulus 2, in particular, is very similar to the Whitehill Road necklace, with a single large bead 30mm in diameter, a single cylindrical bead, and 27 smaller beads ranging from 7–17mm in diameter, again suggesting a size-graded sequence (J Butler 1990, 61–3). Given the close artefactual similarities, contextual parallels in terms of funerary deposition, and the feasibility of direct or coastal maritime travel between the north Kent coast and the Rhine-Maas delta, or the Frisian Coast (which in this period was c. 50km from the Drenthe barrow sites), it is possible that these burial events and the shared presence of amber necklaces point to social or cultural connections and possibly the movement of people across the southern North Sea.

The specific social significance of the Whitehill Road burial is difficult to interpret, however, because of its unusual character and the lack of a clear regional or local context for understanding the contexts and meanings of funerary practices in the mid-2nd millennium BC. It is apparent, however, that formal mortuary deposition was very rare throughout Britain during this period and that all burial events were ‘special’ in some way, involving strategic decisions about body treatment and placement that did not conform to the more general ‘normative’ rules for dealing with the dead amongst the wider population. The selection of an ancient funerary monument as the place of burial was also clearly not an arbitrary decision, but rather suggests a deliberate attempt to evoke the past and to situate the significant dead within the context of an existing landscape of monuments—as an act of identification, conformity or perhaps assimilation or domination. At the same time, the presence of finely-worked amber objects, almost certainly directly or indirectly from a distant source around the shores of the Baltic, and perhaps more immediately from the Netherlands (though the movement of such objects could, of course, have occurred in the other direction), suggests that the burial event was attended by prominent material display, with the ‘conspicuous consumption’ of valued materials/objects that recalled far-off places, exotic origins and particular cultural affiliations.

There has been considerable recent debate concerning long-distance movement of objects and substances, especially amber, during the European Bronze Age (e.g. A Harding 1990; Kristiansen and Larsson 2007; Needham 2000, 2006b, 2009; Van de Noort 2006; cf. Helms 1988), as well as the movement of people that took place alongside or as ‘material’ transfers through practices such as marriage exchanges (i.e. Sorensen 1997) and warrior recruitment (Kristiansen and Larsson 2007, 231–40). Many recent accounts of Bronze Age interactions and cultural transmission draw particular attention to a range of non-mercantile cultural rationales underpinning many aspects of journeying and exchange practices in the 2nd millennium BC, as well as the changing social significance and organisation of ‘trade’ in all its forms. Above all, it is possible to recognise a profound shift of emphasis—in the centuries on either side of 1500 BC—from ‘cosmological acquisition’ as the main driver for chief-led foreign expeditions to procure materials valued for their ‘elite’ connotations and their sacred or magical qualities (Needham 2000), to bulk commodity and prestige goods exchange and the accumulation of material resources for chiefly display and wider redistribution and consumption, including votive deposition (Van de Noort 2006).

Like the builders and sailors of the Dover Boat (Clark 2004), the woman buried at Whitehill Road thus lived at a time of major change in the conditions of social and economic life (as perceived at a scale of centuries), although the extent to which this would have been discernible during her lifetime or even in the context of multi-generational ‘family’ recollection is arguable. However, our limited knowledge of the social strategies and cultural contexts of funerary acts both in south-east England, and more widely in the mid-2nd millennium BC, prevents any conclusive interpretation of the significance of the burial event or the persona of the individual represented. Whilst it is possible, for example, that she and her necklace had travelled together from afar as part of a marriage alliance exchange at some point during the 16th and 15th centuries, it is equally likely that she was a member of an elite local family who had secured the amber necklace during a chiefly expedition to obtain ‘sacred’ substances in 1550 BC, or as part of commodity trade transaction to accumulate items for elite display and redistribution in 1450 BC. There are many possible interpretative permutations along these lines, all of which are more or less credible given the evidence available. The ‘Dutch connection’ may well have been significant, of course, and it is very tempting to imagine maritime interactions involving aristocratic or royal alliances, but equally we may be seeing evidence for a singular episode of movement or exchange that was not repeated as part of an established social and political network.

In many respects the Whitehill Road burial epitomises the Chalcolithic and earlier Bronze Age burial evidence from HS1 Section 1. Overall, that evidence is limited in quantity, and relevant only to a small part of the wider range of mortuary practices and funerary material culture repertoires of these periods, yet at the same time most of the burials are exceptionally important, with considerable research significance at both national and international scales. Considered together, they emphasise how it is impossible to appreciate the ‘meaning’ and relevance of funerary events of the late 3rd and early to mid-2nd millennia BC without looking beyond the individual site or its local context, important though these are for understanding the ‘place’ of the dead in the
cultural landscape. Funerary events of this time were occasions for affirming particular social or sacred identities and allegiances that in many cases owed their power over people’s minds to their exotic origins or continued cultural ‘connectivity’ over long distances. Just as striking is the way that new discoveries of the kind made along the HS1 route can—even in a field as intensely studied as Chalcolithic and earlier Bronze Age funerary archaeology—still provide unexpected new insights that have the potential to reconfigure our wider understanding of social life during these periods.

**Earlier prehistoric worlds and the changing landscapes of the mid-2nd millennium BC**

The date ‘1500 BC’ has come to have an almost totemic presence in British prehistoric studies, marking the great divide between an ‘earlier prehistoric’ world of mobile communities, ephemeral settlement, monument-building, small-scale social groups, minimal hierarchisation, and low intensity subsistence and production practices, and the ‘later prehistoric’ world of sedentary communities, field systems and hillforts, large-scale polities with complex social hierarchies, and increasingly intensive agricultural and craft production (Bradley 1991; 2007, 178–202). It is fully recognised, of course, that ideal-type dichotomies of this kind must inevitably over-generalise and simplify the evidence, and that locally and regionally there will be a good deal of variation in the character and tempo of this transformation, yet the idea of radical cultural change in the middle of the 2nd millennium BC continues to be a key structuring device in our narrative frameworks for British prehistory. In southern Britain, this process has become closely associated if not exemplified by the creation of the earliest co-axial and aggregational field systems (Yates 2007) and the appearance of durable house architecture and relatively long-lived inhabitation of fixed settlements (Barrett 1994, 146–53), all of which suggest completely different relationships between people and the land, and different compositions and organisations of social groups in comparison with those that underpinned earlier patterns of social life. In parallel with these changes, the demise of most Early Bronze Age burial practices and associated material culture repertoires, alongside the rapid decline in the frequency of monument-building in the period 1600–1400 BC, suggest profound changes in the ways that relationships between the present and past, living and dead, and community and place were conceptualised and realised through funerary and architectural media.

The pivotal significance of the Early–Middle Bronze Age transition thus seems undeniable for understanding social changes not only in the 2nd millennium BC but also at much larger temporal and cultural scales. Our understanding of the ‘causes’ and process of this transition, however, remains extraordinarily vague, despite some major new discoveries and reassessments of the changing nature of social life in this period (eg Brück 2000; Yates 2007). To some extent, these new insights have blurred the ‘before/after 1500 BC’ chronological boundary, yet at the same time have largely reinforced overall perceptions of far-reaching transformation at this time. For example, despite evidence for more widespread and sustained clearance and the growing importance of cereal cultivation from the early 2nd millennium BC (Richmond 1999, 80), and occasionally small clusters of bounded fields (eg Martin et al. forthcoming), these developments did not lead swiftly or widely to the construction of large-scale field systems, for which there is no strong evidence before the mid-2nd millennium BC (Johnston 2001; 2008). Similarly, although recent discoveries of Early and Early/Middle Bronze Age houses (eg Garner 2007; Hey 2001; cf. Brück 1999b) have revealed the presence of more complex and lasting modes of occupation during these periods than once imagined, nonetheless it is clear that widespread commitment to fixed, durable settlement and the kinds of social existence this entailed occurred only after 1500 BC (Barrett 1994, 146–53).

The HS1 evidence at first sight contributes little to these general questions or our understanding of social change in the mid-2nd millennium BC in south-east England. This is not in any sense a failing but rather a reflection of the nature of the evidence and perhaps a condition of the particular route of the HS1 corridor. As Tim Champion shows in the following chapter, the Middle Bronze Age evidence is considerable and diverse, yet at the same time surprisingly thin at a local level, with little suggestion of rapid or intensive modification of the settled landscape in the centuries immediately after 1500 BC. Indeed, the overall impression is of gradual change, with a high degree of continuity in the basic modes of inhabitation and landscape use from the earlier Bronze Age, along with some local moves towards more sedentary occupation and agrarian farming in what appear to be small-scale field systems at Sandway Road and Tutt Hill (around the earlier barrows), and possible buildings and ditches at White Horse Stone. It is striking, in this context, that the earliest evidence for substantial extensive field systems in Kent has been found along the northern coastal plain, associated with Deverel-Rimbury ceramics (c 1500–1200 BC: Champion 2007c, 101), whereas large field systems to the south of the chalk escarpment at Brisle Farm, Westhawk Farm and Saltwood Tunnel appear to develop during the Late Bronze Age, after 1200 BC (see Champion, Chapter 4). The Early–Middle Bronze Age transition in the area traversed by the HS1 corridor thus seems to have been locally distinctive. There were significant changes in the way that earlier monuments went out of use, or at least changed from being places primarily for funerary events to places of remembrance and foci for land division and settlement, while accelerating woodland clearance points to the creation of more extensive farmed and grazed landscapes. At the same time, however, the basic patterns of life may have changed only gradually until overtaken by major changes in the Late Bronze Age, when the socio-economic and perhaps political systems that had developed to the north of the chalklands were deliberately extended to the river valleys and Greensand ridges to the south.
Reflections on the earlier prehistoric archaeology of the High Speed 1 route

The HS1 project has provided us with exceptional insights into the nature of earlier prehistoric landscapes across a swathe of south-east England. As the preceding descriptions of the evidence and interpretative discussions have shown, the project has made a major and sometimes unique contribution to our knowledge and understanding of several key dimensions of the earlier prehistory of southern Britain, often with wider relevance or significance at national and international scales. Each one of the ten major excavations that revealed early prehistoric material in situ contexts warrant wider recognition in their own right, although White Horse Stone/Pilgrim’s Way clearly stands out because of the outstanding evidence uncovered of both Early Neolithic timber buildings and Late Neolithic settlement. In inter-site terms, the linear spatial articulation of both settlement structures/activities and monumental architecture (at White Horse Stone/Pilgrim’s Way and Saltwood Tunnel respectively), Late Mesolithic occupation episodes in the vicinity of tree-throw holes, and the presence of several earlier Bronze Age funerary monument clusters below the chalk downland escarpment, point to patterns of social action and organisation that formerly were either unsuspected, rarely encountered and/or only vaguely appreciated in the wider region.

Of course, the arbitrary path of the HS1 corridor in relation to the diverse and changing spaces of prehistoric social life—in a sense, slicing through past cultural worlds without any regard to their possible original forms or parameters—has its weaknesses in trying to understand these worlds, especially as any narrow landscape transect must inevitably encounter only tiny disconnected fragments of past social activities. From this perspective, we must be careful not to imagine any intrinsic connectedness among HS1 sites simply by virtue of the fact that they occurred along a single linear ‘exposure’. Our encounters with the particular pasts revealed by these sites were thus always a matter of chance and we should not be surprised by their lack of cultural coherence or relatedness. This condition of the evidence is especially highlighted in earlier prehistoric studies because of the unevenness and extraordinary diversity of the evidence in space/time and in terms of the modes of social agency and expression represented. In this regard, to have described the HS1’s earlier prehistoric evidence thematically would have been a pointless exercise: whilst it is possible, for example, to discuss ‘occupation sites’ in the Late Neolithic, and possibly the Late Mesolithic, it is not possible to do so in relation to the Early Bronze Age evidence. Similarly, direct evidence for agricultural practices and production technologies (such as pottery manufacture) is either absent or so incidental that it is impossible to draw general conclusions, while the few examples of mortuary deposits were almost entirely restricted to Chalcolithic and Early Bronze Age contexts.

Instead of a broad multi-period thematic approach, which would have become bogged down in unproductive reflections on the ‘evidence that wasn’t there’, it has been far more fruitful to explore those aspects of early prehistoric cultural worlds that the HS1 evidence really does reveal, often to striking effect, and to situate that evidence in its wider period-specific cultural context at several social and spatial scales of enquiry.

Viewed in this way, the strengths of the results of the HS1 project far outweigh their limitations. Besides revealing significant aspects of individual sites, the huge evidential and analytical returns that follow from investment in large-scale excavation more than vindicate the costs involved, both at a site level and in relation to overall programmes of archaeological intervention. To be able to ‘see’ past human activity in a spatially extensive manner and thereby contextualise the particular (such as the ‘moment’ of a depositional act in a pit) in relation to a wider, spatially-structured, meaningful pattern of behaviour, makes possible a level of understanding that trenching and ‘key-hole’ investigation cannot remotely hope to achieve. This is especially important in relation to early prehistoric activity, the particular social forms and qualities of which in most everyday contexts appear to have been relatively fluid and extensive, with very little continuous long-term inhabituation or use of particular places.

It is also plain that a critical requirement for understanding early prehistoric evidence is to ensure that it is situated with reference to inter-regional and wider comparative frameworks of interpretation. Knowledge of the ‘big picture’ is absolutely essential for understanding the local and particular. The nature of the White Horse Stone/Pilgrim’s Way Early Neolithic timber structures, for example, cannot be understood if disconnected from the wider north-west European context of timber architecture in the early 4th millennium BC. Similarly, the significance of Late Neolithic activity at the same site cannot be evaluated without an appreciation of the rarity of settlement evidence in Britain and near parts of continental Europe at this time. The graves excavated at Northumberland Bottom, Saltwood Tunnel and Whitehill Road, which could all-too-easily be disregarded as ‘just’ additional examples of Chalcolithic and Early Bronze Age burials, are revealed to be exceptionally unusual and distinctive funerary events once their significance beyond their local south-east English settings is fully appreciated. Most important of all, perhaps, are the exceptional insights that such a complex engagement with events, cultural landscapes, and wider structures of social life and meaning produces for appreciating the ‘otherness’ of early prehistoric worlds. In ‘doing things differently’, and thinking things differently, people in these pasts lived cultural lives in many respects alien to ours. In this light, one of the greatest strengths of the HS1 project is the way it provides so many different ‘windows’ through which these ‘other’ lives and worlds can be glimpsed.