



## CHAPTER 2

### Hunter-gatherers and First Farmers (500,000 to 1700 BC)

*by John Lewis*

## Introduction

This chapter deals with the hunter-gatherer landscapes prior to c 4000 BC (the Palaeolithic and Mesolithic), the appearance of the first agriculturists and transformation of the landscape through the construction of ceremonial monuments between 4000 BC and 1700 BC (the Neolithic and Early Bronze Age). The chapter first lays out the framework of material evidence and assumptions regarding dating that will guide our analysis, relative to the research approach established in Chapter 1. This is then followed by a chronological narrative, set against a background of the wider Heathrow landscape. Figure 2.1 shows the location of the main sites in the Heathrow area mentioned in the text.

Figure 2.1: Location of sites mentioned in the text

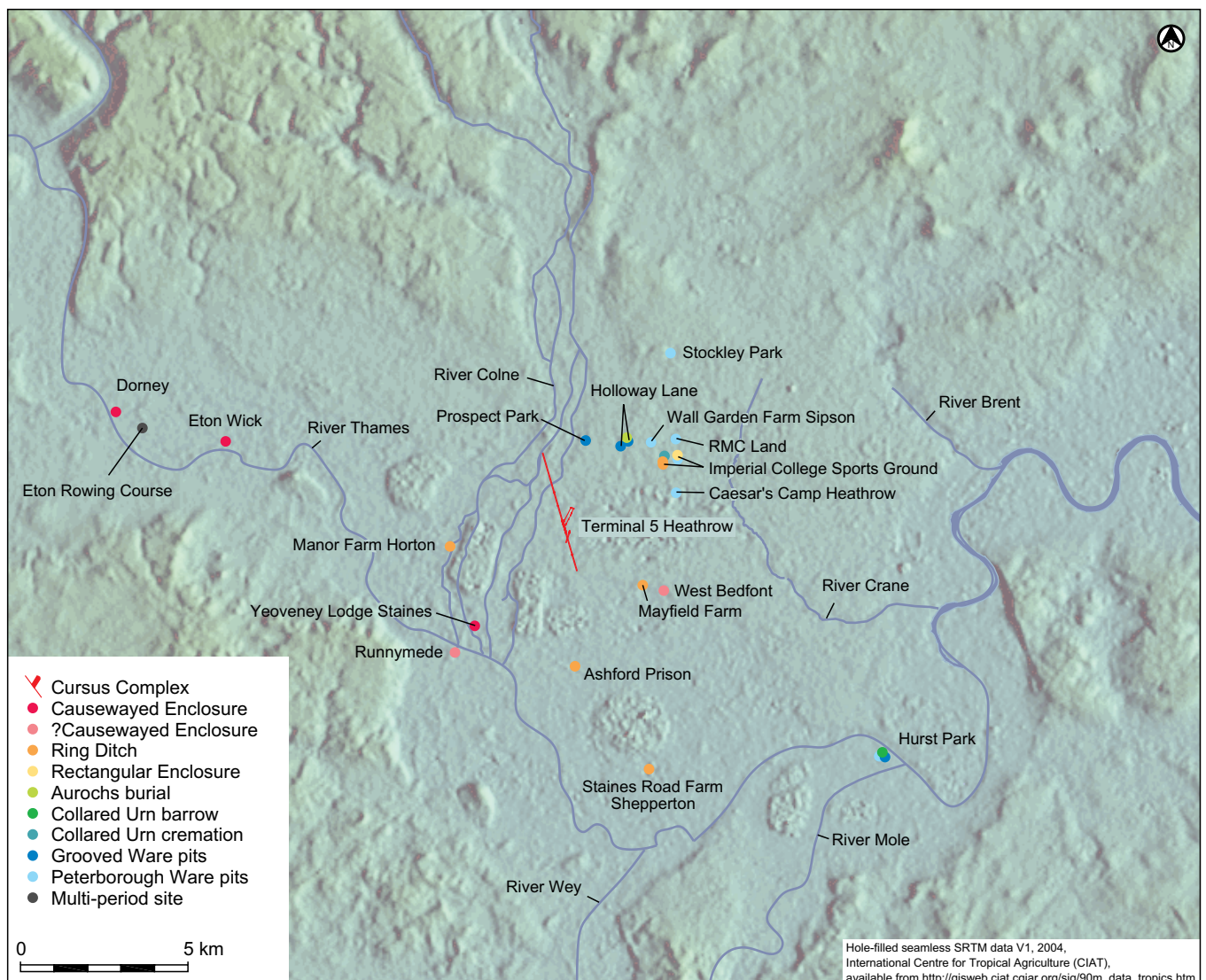
## Summary of the evidence

### Palaeolithic and Mesolithic

A handful of heavily rolled flint artefacts (including a small handaxe), none of which was *in situ*, are our only testimony to the Palaeolithic at Heathrow Terminal 5, whilst the Mesolithic is represented by flint artefacts mostly residing in features of much later date. However, a cluster of pits was excavated in the northern part of Perry Oaks Bed B and Area 45 of Terminal 5 ('Pre C1 features' on Fig. 2.2) which contained burnt flint. This material provided thermoluminescence dates suggesting activity sometime in the 8th to 6th millennia BC. Trial trenching at Bedford Court detected a small complex of post and stakeholes, one of which contained material which was radiocarbon dated to c 6000 cal BC (wk-11773) (Fig. 2.2).

### Neolithic

The Neolithic evidence from Perry Oaks and Terminal 5 consisted of two posthole complexes and a possible settlement comprising pits, postholes and two gullies. These were superseded sometime between c 3600 and 3300 BC by four cursus monuments (C1–C4), each of different length, width, orientation and architectural form. A fifth cursus monument (C5), visible as a crop mark, lay outside the excavated area, and may have been part of the C3 monument (see below and Fig. 2.2). Three small sub-circular 'horseshoe' enclosures (HE1 – HE3) were also excavated and tentatively dated to the late 4th (HE1), the 3rd (HE2) and the late 3rd / early 2nd (HE3) millennia BC. Other features include tree-throws and occasional postholes of the 4th and 3rd millennia, as well as scatters of pits containing Plain Bowl, Peterborough



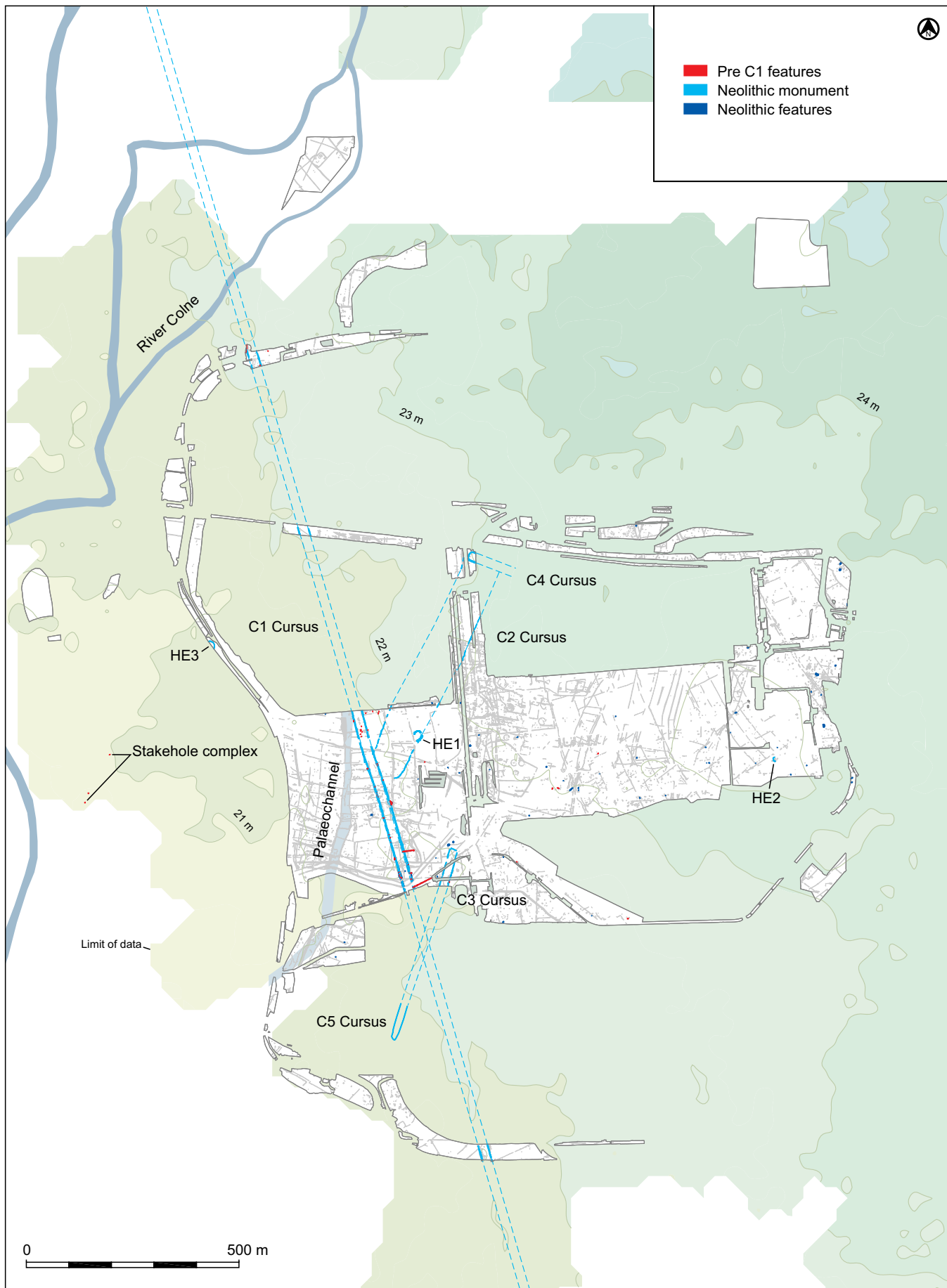


Figure 2.2: Overview of the hunter gatherer landscape at Heathrow Terminal 5

Ware and Grooved Ware pottery and associated lithic material. Neolithic flint artefacts and pottery fragments were also found residing in later features, as well as in the Neolithic features themselves.

The specific Neolithic monuments excavated were as follows:

- A posthole complex located in the POK96 excavations, which was stratigraphically earlier than the construction of the C1 Stanwell Cursus (see Fig. 2.14).
- A possible settlement located in Area 49 of the Terminal 5 excavations consisting of pits, postholes and two gullies (see Fig. 2.15). These features were stratigraphically earlier than the C1 Stanwell Cursus.
- The C1 Stanwell Cursus. This monument consisted of two parallel ditches *c* 20 m apart, orientated NNW-SSE. It ran for at least 3.6 km and possibly up to 3.8 km. The cursus ran through the 8th–6th millennium pit complex and earlier posthole complexes, and was unusual in having a single central mound. More posts were erected in the area of the posthole complex when the cursus ditches began to silt up, suggesting a reaffirmation of this location. Roughly contemporary with this event, a second cursus (the C2 monument) was constructed.
- The C2 Cursus consisted of two parallel ditches, *c* 60 m apart and orientated NNE-SSW. This monument probably had the more usual arrangement of an internal bank adjacent to each of the two ditches. The C1 Stanwell Cursus served as the southern terminal of the C2 Cursus and the Terminal 5 excavations suggest this monument ran for at least 480 m. On the basis of pottery, stratigraphy and analogy with other monuments of this type, both the C1 and C2 Cursus were probably constructed sometime between 3600 BC and 3300 BC.
- The C3 Cursus was 230 m long with ditches 19 m apart and orientated NNE-SSW. It appears to have formed a north-eastward extension of the C5

Cursus which was unexcavated but visible as a crop mark on an aerial photograph. The C5 monument is approximately 230 m long, excluding a section linking it to the C3 Cursus.

- The C4 Cursus survived only as a short (82 m) length of twin ditches (*c* 21 m wide) and a terminal. It appeared to be a later addition to the terminal of the C2 Cursus.
- The HE1 ‘horseshoe’ shaped enclosure was located within the C2 Cursus. It is unclear whether this enclosure pre- or post-dated the C2 Cursus. No ceramic dating evidence was retrieved from the enclosure and the lithic material is inconclusive, but suggestive of a period of use in the late 4th millennium BC. The enclosure was *c* 17 m in diameter and probably consisted of ditch sections with an internal bank. It was orientated on the mid winter sunset and the mid summer sunrise.
- The HE2 Enclosure was very badly truncated by the construction of the sludge works. It was an irregular horseshoe shaped earthwork of approximately 10 m diameter. The fills of the ditches contained fragments of Peterborough Ware, Grooved Ware and a chisel shaped arrowhead. Its construction is dated to the 3rd millennium BC.
- The HE3 Enclosure was a partially excavated circular monument of approximately 19 m diameter. The fills of the ditch contained fragments of Collared Urn or Beaker pottery and animal bone. It is tentatively dated to the late 3rd / early 2nd millennia BC. Apart from the HE3 Enclosure, remains dating to the Early Bronze Age (2400 – 1600 BC) consisted of a few pits and fragments of pottery residing in later features.

Environmental evidence for the entire Neolithic period was very limited, with a single pollen diagram from a pit relating to the pre-cursus settlement of Area 49. This suggested that the previously wooded landscape had undergone a significant amount of woodland clearance prior to the construction of the C1 monument.

A second pollen diagram presenting the results from a pit cutting one of the ditches of the C1 Stanwell Cursus suggests the location was either in a glade or on the woodland edge.

## Outline of the narrative

Next we will outline the evidence for constructing a chronological framework for human activity during the huge time-span under consideration. The nature of the evidence for Palaeolithic and Mesolithic occupation is assessed, before turning to look at the locations of Mesolithic activity in more detail. These locations are interpreted as meeting places for kin-groups, with the pit complex being especially important.

Moving forward to the Neolithic, the sequence of monument construction is explored. The construction of the Cursus complex is seen as revolutionary, both in terms of an architectural modification to the landscape, but also in being a physical manifestation of kin-groups coming together to form a community. This was achieved by communal effort to build a monument whose architecture linked locations of great importance (such as the Mesolithic pit complex, the pre-cursus timber complexes and the settlement) to kin-groups over several millennia. We suggest that this transformation occurred in a landscape which was becoming increasingly cleared following the ‘elm decline’, and may have occurred in response to the need for new mechanisms to apportion land and resources. These new mechanisms may have required architectural settings for ceremonies to negotiate these matters.

This transformation set in motion ceremonies associated with access to land and resources which rapidly became established as the way in which the community developed. Material (eg pottery and flint) in tree-throws and the occasional pit show that occupation was spreading across the landscape at this time, probably in the many woodland clearings that were being exploited for transient arable and pastoral agriculture.

This pattern of ceremony associated with monuments seems to have lasted through the currency of Peterborough Ware pottery, until the middle of the 3rd millennium BC. At this time, evidence from other West London sites suggests changes in the landscape, with a marked increase in the deposition of artefacts in isolated pits, starting with Peterborough Ware and continuing with Grooved Ware. These pit deposits can be interpreted as the end point in a sequence of ceremonies, which started at the now ancient earthwork monuments. The pit deposits were the final act, which sealed the agreement over which kin-group had rights over a particular clearing or parcel of land. This represents the first demonstrable physical act of marking a kin-group's rights over a piece of land, however small or however transient it may have been.

Other evidence from West London and the Terminal 5 excavations suggests that small circular monuments continued to be constructed in association with the use of Grooved Ware pottery from the latter half of the 3rd millennium BC onwards. There was thus a renewed requirement for architectural settings in which representatives of the kin-groups would meet and maintain the cohesion of the community.

The mechanisms by which the community had operated cohesively had been changing since the construction of the cursus monuments, up to 1500 years before, and so it is perhaps not surprising that we see changes at the turn of the 3rd and 2nd millennium BC. During this period, Beaker pottery and the associated burial rights seem to have been almost ignored in the Heathrow area. Instead, Collared Urn appears to have been utilised in similar ways to the Grooved Ware of earlier centuries, except that now it sometimes incorporated the remains of the dead in making claim to land. In many ways this marked the 'last gasp' use of monuments, ceremonies and discrete artefact deposits to negotiate access to land and resources in what was by now an increasingly open landscape.

## Chronological framework

In order to describe the human inhabitation of the Mesolithic, Neolithic and Early Bronze Age landscapes, and to understand the transformation of one to the other, it is necessary to define the tools available to build a chronological framework for these periods. Unfortunately, very few reliable radiocarbon determinations were successfully obtained from Mesolithic or Neolithic deposits due to the effects of groundwater on organic remains. This framework is thus largely defined by ceramic and lithic artefacts, which can be dated with varying chronological precision.

The chronological framework adopted in this chapter is one that is generally accepted for southern Britain. Recent developments in the dating of particular Neolithic ceramic traditions

have allowed some refinement of chronology of the Neolithic monumental landscape at Heathrow. In particular, more radiocarbon determinations on Neolithic pottery from the London region have become available since the publication of Volume 1 (Framework Archaeology 2006), and important research into modelling radiocarbon dates of Neolithic monuments has been published (Bayliss *et al.* 2008).

## Absolute dates

Absolute dates from the Mesolithic to Early Bronze Age at Terminal 5 are extremely sparse, though a range of Thermoluminescence, Optically Stimulated Luminescence and radiocarbon dates was obtained, and these have been reviewed and modelled using Bayesian techniques by Healy (Healy, CD Section 20).

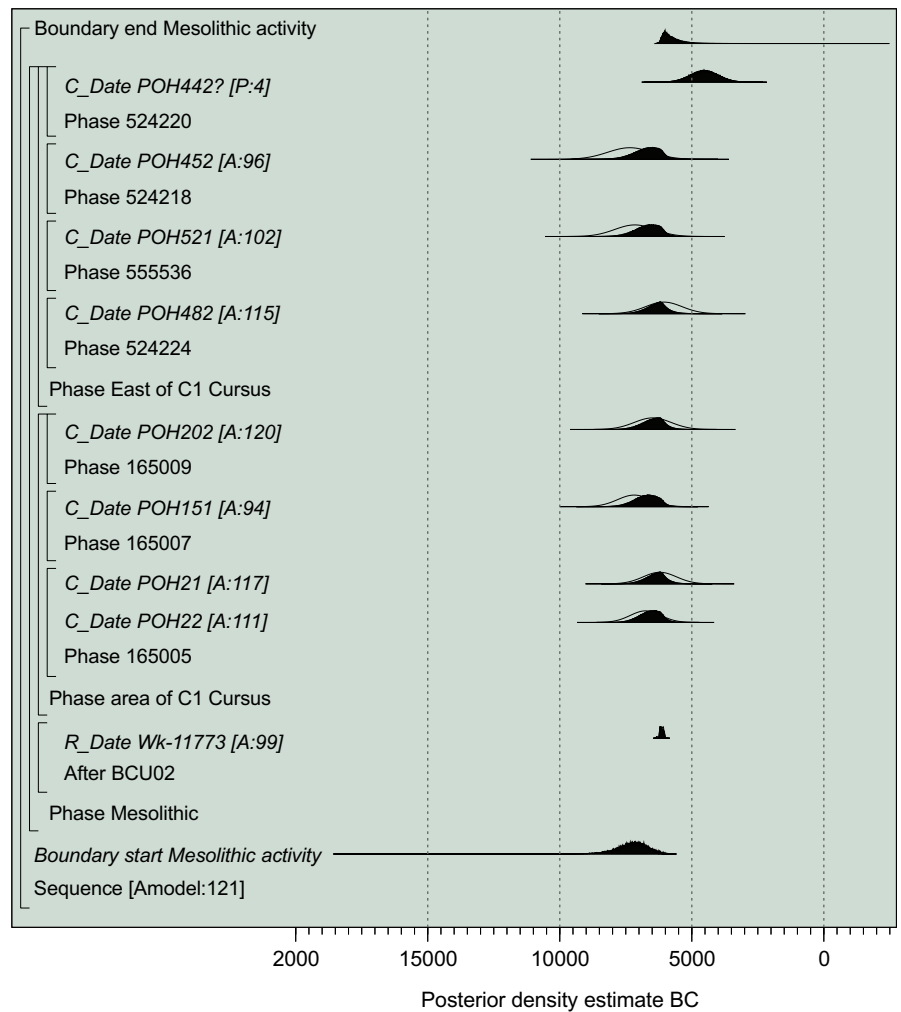


Figure 2.3: Thermoluminescence dates from two groups of features containing high concentrations of burnt flint and radiocarbon date for a waterlogged post to the west of the main excavated area.

## Mesolithic dates

Four thermoluminescence dates have already been published in Volume 1 for burnt flint from three pits in the area of the C1 Cursus (Framework Archaeology 2006, 39–44 and Healy CD Section 20, POH21, POH22, POH151, POH 202). These can now be modelled with four further TL measurements on burnt flint from four pits 20 m to the north-east (CD Section 20: PO442, PO452, PO482, PO521). Some 675 m west of the first group of dated pits, a radiocarbon date [of 6240–5990 (cal BC 2 sigma) Wk-11773] provides a terminus post quem for a waterlogged post of unidentified timber which survived in one of a row of three postholes found during the Bedfont Court evaluation in tufa deposits among a network of palaeochannels.

Seven of the eight TL measurements are statistically consistent ( $T'=3.1$ ;  $T'(5\%)=12.6$ ;  $\chi^2=6$ ). The eighth, from pit 524220 (POH442?), seems to have resulted from a separate episode of activity, in 5590–3470 BC (95% confidence), and is therefore excluded from the model. The other measurements show good agreement when modelled in a single bounded phase ( $A_{\text{model}}=120.9$ ,  $A_{\text{overall}}=119.1$ ). Regardless of location, they indicate activity between 8540–6150 and 6300–4850 cal BC (95% probability), probably between 7760–6610 and 6190–5640 cal BC [68% probability; Fig. 2.3: start Mesolithic activity, end Mesolithic activity], spanning a period of 69–2120 years (95% probability), probably of 410–1430 years (68% probability; distribution not shown).

(Healy, CD Section 20)

## Neolithic dates

Two dates from features excavated at Perry Oaks were reported in Volume 1 (Framework Archaeology 2006, 31). The earlier Neolithic radiocarbon date came from sediment in a pit (150011) that cut the Stanwell Cursus ditch fills, but the date (4349–4047; NZA14902 cal BC 2 sigma) was very early, suggesting that the organic material tested was residual (Healy, CD Section 20). A radiocarbon date of 3030–2870 BC (WK11473 cal BC 2 sigma) was obtained from a bowl-shaped pit (137027) containing small amounts of cremated human

bone. Unfortunately this feature had also been contaminated by later material (Framework Archaeology 2006, 84).

Regarding these dates and others from the main Terminal 5 excavations, Healey makes the following observations:

*The difficulty of dating features generated between the Mesolithic episode and the establishment of the Bronze Age land divisions (Framework Archaeology 2006, 49–52, 74–77, 82–85) has not diminished... Shallow features and fine sediments made for problems of intrusion and redeposition... Such problems were compounded by a dearth of samples suitable for radiocarbon dating from the C1 Cursus. This prompted a series of optically stimulated luminescence measurements, one on fine-grained polymineral grains from a sherd in a basal deposit in the west cursus ditch, 12 on sand-sized quartz grains from the fills of the cursus ditches, and 4 on sand-sized quartz grains from the fills of features in stratigraphic relation to them (Rhodes and Schuenniger 2003). The problems of bioturbation, incomplete zeroing, and the estimation of both water content and overburden over time, detailed by the authors, are illustrated by the results for samples from the cursus ditches, which range from 5930±510 BC for a secondary fill of the east ditch (OxL-1461) to 1150±290 BC (OxL-1463) for the sherd from the base of the west ditch. By modelling two local sequences and a series of five measurements from a single context at a third location separately it is possible to achieve internally consistent, but disparate, results for each. In 537124/537136 the estimated construction date would be 10660–3890 cal BC (95% probability), probably 6530–4350 cal BC (68% probability; build C1 cursus in 537124). In 527200/527201 it would be 2850–2120 cal BC (95% probability), probably 2660–2290 cal BC (68% probability; build C1 cursus in 527201). In 527107 it would be 6430–4020 cal BC (95% probability), probably 5350–4320 cal BC (68% probability; build C1 cursus in 527107). The internal consistency of the local sequences suggests that the variation is due to the immediate circumstances of each sampling location...*

*The dating of cursus monuments remains problematic because they are characteristically clean. A late 5th to mid*

*4th millennium BC estimate for a cursus at Eynesbury, Cambridgeshire, was calculated based on a consistent series of OSL measurements (Rhodes 2004, 61)...*

*There remains the inference that the C1 Cursus/bank barrow was built within the span of other such monuments in Britain, from 3640–3380 to 3260–2920 cal BC (95% probability; Barclay and Bayliss 1999, 25), based on modelling an admittedly inadequate collection of 54 radiocarbon dates from 15 sites...*

*Beyond the monuments at Terminal 5, a TL date of 3230±600 BC (4430–2030 BC at 95% confidence; POH323) is not inconsistent with the Late Neolithic character of the associated flint industry in pit 129109. Rather later activity is evidenced by a further TL date of 2090±610 BC (3310–870 BC at 95% confidence; POH331) from feature 129086.*

(Healy CD, Section 20)

It has to be concluded that the attempt to create a calendrical Neolithic chronology of the Heathrow landscape at Terminal 5 using absolute dates has failed. For radiocarbon, this was due to poor preservation of suitable material, contamination by later material, and the inherently 'clean' nature of cursus and ring ditch monuments. For OSL, the multiplicity of assumptions demanded by the technique produced a very wide scatter of dates. As with Volume 1, we must rely on a relative chronology based on artefacts dated from other sites.

## Relative chronology

### Lithic technology and typology

We will now look at the context and distribution of the Mesolithic and earlier Neolithic flint work within the Terminal 5 and wider Heathrow landscape, and try to construct a non-monumental geography of the period 9000 to 3000 BC.

Lithic artefacts and assemblages have an important part to play in defining a relative chronological sequence. However, in chronological terms, it is generally only possible to speak in terms of the following:

- Early and Late Mesolithic
- Mesolithic or Neolithic,
- Earlier and later Neolithic.

This is partly due to the relatively undiagnostic nature of lithic waste and debitage. These terms cover much broader periods of time than the

ceramic evidence and so the chronological resolution of the historical narrative is coarser when relying on lithic evidence alone, as Table 2.1 indicates. Cramp, who analysed the lithic assemblage from Perry Oaks, made the following observations on the chronologically diagnostic Mesolithic and Neolithic flint assemblages:

Lithic Period Division	Calibrated BC
Late Glacial	10,300-8800
Early Mesolithic	8800-7000
Late Mesolithic	7000-4000
Earlier Neolithic	4000-3200
Later Neolithic	3200-2400
Early Bronze Age	2400-1500

Table 2.1: Chronological divisions of lithic artefacts

Date of object	No. of objects	Object	Feature No.	Date of feature	Feature interpretation
Early Mesolithic	1	Retouched bladelet	-	-	Unstratified
Early Mesolithic	1	Microlith	588343	Mesolithic or Neolithic	Palaeochannel
Early Mesolithic	1	Blade	129013	Early Neolithic	Posthole
Late Mesolithic	1	Microlith	515231	Middle Bronze Age	Ditch
Mesolithic	1	Blade	502002	-	Subsoil
Mesolithic	1	Axe or adze	623027	-	Ditch
Mesolithic	1	Miscellaneous retouch	100000	-	Backfill of previous archaeological trench
Mesolithic	1	Spall	-	-	Unstratified
Mesolithic	1	Blade	516168	Prehistoric	Posthole
Mesolithic	1	Blade	163135	Mesolithic or Neolithic	Tree-throw
Mesolithic	1	Bladelike flake	172081	Mesolithic or Neolithic	Tree-throw
Mesolithic	1	Tertiary flake	121173	Neolithic	Ditch
Mesolithic	1	Bladelet	156191	Early Neolithic	Tree-throw
Mesolithic	1	Blade	156191	Early Neolithic	Tree-throw
Mesolithic	1	Bladelet	156191	Early Neolithic	Tree-throw
Mesolithic	1	Blade	156191	Early Neolithic	Tree-throw
Mesolithic	1	Retouched flake	511067	Early Neolithic	Tree-throw
Mesolithic	1	Axe or adze thinning flake	961501	Early Neolithic	Ditch
Mesolithic	1	Unclassified burin	617042	Early Neolithic	Ditch
Mesolithic	1	Core prep or crested blade	588324	Middle or Late Neolithic	Ditch
Mesolithic	1	Bladelike flake	531011	Late Neolithic	Pit
Mesolithic	1	Microburin	127022	Late Neolithic	Pit
Mesolithic	1	Core prep or crested blade	588324	Late Neolithic or Bronze Age	Ditch
Mesolithic	1	Blade	534004	Bronze Age	Tree-throw
Mesolithic	1	Blade	544092	Middle Bronze Age	Waterhole
Mesolithic	1	Blade	555561	Middle Bronze Age	Ditch
Mesolithic	1	Blade	963218	Middle Bronze Age	Ditch
Mesolithic	1	Blade	594133	Middle Bronze Age	Ditch
Mesolithic	1	Blade	515316	Middle or Late Bronze Age	Gully
Mesolithic	1	Rejuvenation flake core face or edge	573052	Middle or Late Bronze Age	Ditch
Mesolithic	1	Unclassified	817065	Middle or Late Bronze Age	Pit
Mesolithic	1	Bladelike flake	106013	Late Bronze Age	Cremation
Mesolithic	1	Microburin	142010	Late Bronze Age	Pit
Mesolithic	1	Blade	160016	Late Bronze Age	Ditch
Mesolithic	1	Retouched bladelet	180080	Late Bronze Age	Well
Mesolithic	1	Burin spall	401075	Late Bronze Age	Ditch
Mesolithic	1	Core prep or crested blade	582319	Late Bronze Age	Ditch
Mesolithic	1	Burin spall	160104	Late Bronze Age	Ditch
Mesolithic	1	Rejuvenation flake tablet	148303	Middle Iron Age	Pit
Mesolithic	1	Microlith	107084	Late Romano-British	Ditch
Mesolithic	1	Dihedral burin	819054	Unphased	Natural feature
Total	41				

Table 2.2: Mesolithic flints by feature and feature date

While diagnostic tool types, such as microburins and microliths, provide a more reliable and quantifiable resource, it is possible that a significant quantity of undiagnostic Mesolithic flintwork is present but has been subsumed by the Early Neolithic assemblage with which it shares many technological characteristics. This invisible element may, not entirely but to some extent, account for the apparent under-representation of the earlier period in terms of flintwork from the site. Examples include some of the blades, bladelets and rejuvenation flakes, along with the two blade cores from WPR98. These pieces were isolated according to general technological traits, such as the presence of platform edge abrasion and evidence for the use of soft-hammer percussion.

(*Framework Archaeology 2006, 32*)

These observations equally apply to the Terminal 5 lithic assemblages, and no further refinement of chronological resolution has been possible. For example Table 2.2 lists the 41 flint artefacts that could be attributed to the Mesolithic period with some certainty, and also shows the date range of the later features from which they were recovered (none came from cut features attributable to the Mesolithic). In addition, 165 struck flints could be dated no more closely than Mesolithic or Neolithic.

### Ceramic chronology

The ceramics cannot be used to achieve accurate absolute dating, but they can support the general sequence established using absolute methods. It is important to stress that the dates referred to in this section reflect the main period of use of the ceramics concerned throughout southern Britain.

The relative ceramic chronology at Terminal 5 allows us to discuss historical change within the time periods outlined in Table 2.3. A number of caveats must be applied in using this relative chronology. Firstly, the currency of different ceramic types overlaps—they are not *chronologically* mutually exclusive. This overlap may be a product of the vagaries of radiocarbon dating, as discussed by several authors (eg

Date	Fabric	No. sherds	Weight (g)	ASW (g)
Early Neolithic	FL4	1010	4033	-
	FL8	1	15	-
	FL15	54	607	-
	FL16	51	315	-
	FL17	11	77	-
	FL18	23	286	-
	QU13	23	152	-
	QU17	5	56	-
Sub-total Early Neolithic		1178	5541	4.70
Middle Neolithic	FL19	22	172	-
	FL20	7	48	-
	FL21	148	684	-
	FL22	225	772	-
	FL23	49	887	-
Sub-total Middle Neolithic		451	2563	5.68
Late Neolithic	GR2	216	1186	-
	GR3	348	1252	-
Sub-total Late Neolithic		564	2438	4.32
Early Bronze Age	GR1	104	325	-
	GR9	52	521	-
Sub-total Early Bronze Age		156	846	5.42
<b>Total</b>		<b>2349</b>	<b>11,388</b>	<b>20.12</b>

Table 2.3: Relative ceramic chronology

Garwood 1999; Gibson and Kinnes 1997). Of particular importance for us is the overlap between Undecorated Plain Bowl and decorated vessels and Peterborough Ware in the period 3600 BC to 3300 BC, which recent radiocarbon dates (see below) confirm. Secondly, the ceramic types (particularly Peterborough Ware) cut across traditional chronological subdivisions of the Neolithic, 'earlier and later' or 'early, middle and late'. Thirdly, the chronology is based on national reviews of the ceramics but the regional and even local ceramic sequence could show significant variations.

In the following section we will summarise the ceramic evidence from Terminal 5 within the relative chronological framework outlined above.

### Carinated Bowls 4000–3600 BC

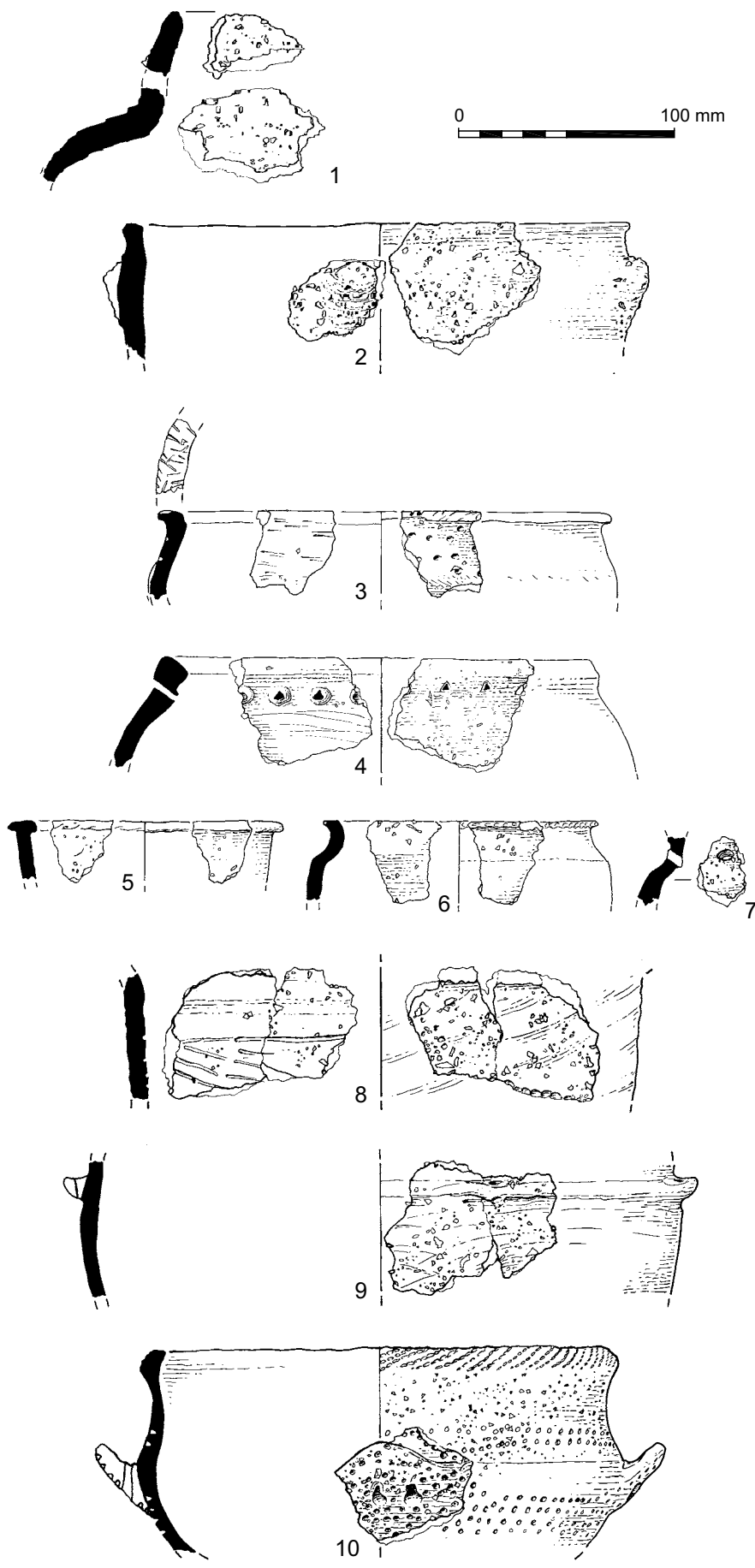
The earliest ceramic form identified in Britain is the Carinated Bowl, generally dated to c 4000–3600 BC (Herne 1988; Gibson 2002, 70). However, Cleal has recently re-appraised the type, and concluded,

...that the majority were carinated in some way, but were not all of the Classic Carinated Bowl form, which should focus our attention and interest particularly on the minority which were not carinated at all.

(Cleal 2004)

The evidence for this tradition at Terminal 5 is elusive, but could be represented by a single sherd from tree-throw 156191, although the remaining pottery from this feature appears to be later (see below). Within the Thames Valley, the excavation of a single crouched inhumation that was directly associated with sherds of carinated bowl near the Thames at Yablsey Street, Blackwall, London (Coles *et al.* 2008) is of great importance. A radiocarbon date from a retaining timber in the grave demonstrated that the burial (and hence the associated pottery) took place sometime between 4220 – 3970 BC. Furthermore, charred plant remains indicated the collection of both wild plant remains and cultivated cereals was occurring at this time. This is one of the earliest Neolithic burials from the British Isles.





## Undecorated Bowls and Decorated Vessels 3600–3300 BC

The bulk of the early ceramics from Terminal 5 probably dates within the Early Neolithic sequence encountered elsewhere. This part of the assemblage consists of undecorated Plain Bowl Ware types, with a small proportion of decorated vessels (Fig. 2.4).

These types are thought to have emerged c 3600 BC, continuing in use to c 3300 BC (Gibson 2002, 70). These dates correspond with Cleal's 'High' or Developed Neolithic (c 3650–3350 BC).

*This is the phase with features of the 'classic' earlier part of the Neolithic most fully developed: causewayed and 'tor' enclosures (and cursus) emerge here, joining long barrows, and ceramics; it also includes the origins of Peterborough Ware as part of a widespread developing pattern of impressed wares.*

(Cleal 2004)

The Terminal 5 assemblage contained:

*A total of 1178 sherds weighing 5541g was identified as Early Neolithic. Some uncertainty remains in the separation of Early Neolithic and Middle/Late Bronze Age flint-tempered fabrics, but the increased numbers of diagnostic sherds has aided this distinction somewhat.*

Figure 2.4: Early Neolithic Undecorated Bowls and Decorated Vessels. 1. Plain rim; fabric FL4. PSH02, context 561288, pit 561277 (secondary fill); 2. Plain rim; fabric FL15. PSH02, context 602086, ditch 602079 (secondary fill); 3. Externally thickened rim; impressed decoration; fabric FL4. PRN 1766, context 148109, tree-throw 156191; 4. Expanded rim with pre-firing perforations; fabric FL4. PRN 2927, POK 96, context 961734, ditch 961508; 5. 'T'-sectioned rim; fabric FL4. PRN 3138, context WPR 98, 148109, tree-throw 156191; 6. Angular rim; fabric FL4. PRN 3140, WPR 98, context 148109, tree throw 156191; 7. Body sherd from just below rim, with pre-firing perforation; fabric FL4. PRN 1753, WPR 98, context 148109, tree-throw 156191; 8. Body sherd; fabric FL4. PRN WA-22, PSH02, context 558059, tree-throw 558057; 9. Body sherd; fabric FL15. PRN U-26, context 659083; 10. Expanded rim; fabric FL18. PRN WA-2, 3 & 4, TEC05, context 836047, pit 836044.

*Eight fabrics were identified, six flint-tempered (FL4, FL8 and FL 15-18) and two sandy (QU13 and QU17). There is nothing to suggest anything other than local manufacture for the Early Neolithic assemblage, which is a pattern well documented for other earlier Neolithic assemblages in the Thames Valley, such as Staines (Robertson-Mackay 1987, 67) and Runnymede Bridge (Kinnes 1991, 158).*

*The assemblage includes 51 rim sherds, which derive from a maximum of 34 vessels (a maximum of 12 from tree throw 156191, and three from ditch 961508).*

*Most are too small to ascertain overall vessel profile, or even rim orientation, and it is therefore not possible to place the vessels in any classificatory scheme such as Cleal's (1992). However, most appear to derive from open or neutral forms, at least one is carinated (Fig. 2.4, 6), and two appear to be shouldered (Fig. 2.4, 1, 10). Three vessels are decorated, one with impressed dots (Fig. 2.4, 3); a second with incised lines on the interior (Fig. 2.4, 8); and a third with impressed dots on the body and twisted cord on the rim (Fig. 2.4, 10). Four have pre-firing perforations just below the rim, which may also be considered as decorative (Fig. 2.4, 4 and 7), and four have applied lugs (Fig. 2.4, 2, 9 and 10). On one of the latter, the lug is elongated and tapering, and has a vertical perforation made when the clay was leather hard (Fig. 2.4, 9); a second has a series of lugs approximately 25mm below the rim, at least one of which has a horizontal incision across its width (Fig. 2.4, 2), and a third has a lug with a pair of pre-firing perforations (Fig. 2.4, 10).*

*(Leivers with Every and Mephram, CD Section 1)*

In recent years, Bayseian modelling of radiocarbon dates for the Early Neolithic has started to yield results. It would appear that long barrows began to be constructed before causewayed enclosures, with very few long barrows constructed before 3800 BC and causewayed enclosures being constructed from the 37th century BC (Bayliss *et al.* 2008). Although some causewayed enclosures (such as Hambledon Hill and Windmill Hill in Wessex) were used for over 300 years, the majority were in use for no more than a few

generations or shorter (*ibid.*, 33). By analogy, this is the period which sees the main phase of construction of large enclosures in the Heathrow area, such as Yeoveney Lodge, Staines (Robertson-Mckay 1987), Eton Wick (Ford 1986) and possibly Runnymede (Needham and Trott 1987, 482 and fig. 2). Turning to Cursus monuments, it is now accepted that they were mostly constructed during the period 3600–3000 BC (Barclay and Bayliss 1999), and would seem to have been built slightly after the Causewayed enclosures. By analogy, we can attribute the construction of the Terminal 5 cursus complex to the same period.

Several cursus appear to be associated with Peterborough Ware (eg Drayton North, Oxfordshire (Barclay *et al.* 2003, 203), Springfield, Essex (Buckley *et al.* 2001, 128)). However, the Dorset Cursus produced sherds of Early Neolithic pottery from the basal primary fills, with larger quantities of Peterborough ware from an adjacent 'occupation site' in the uppermost fills (Barrett *et al.* 1991, 46 and 71, fig. 2.13). This sequence is similar to that from the Stanwell C1 Cursus at Terminal 5.

*Parallels for the bowl fabrics and forms occur locally, for instance at Staines and Runnymede Bridge (Robertson-Mackay 1987; Kinnes 1991; Longworth and Varndell 1996; Needham 2000). The range of forms and predominantly coarse flint tempered fabrics is better matched at Staines, as the published Runnymede material tends to be finer and to have a greater proportion of carinated forms. These differences are perhaps chronological, with the Runnymede material earlier. This difference may also be visible in terms of decoration. As at Staines, the lack of decoration among the bowls from Heathrow T5 is notable (the ratios of decorated to plain vessels are 1:17 at Heathrow T5; 1:23 at Staines; totals for Runnymede are not available). In this respect the Heathrow T5 assemblage is similar to other regional comparanda such as the material from Cippenham, Slough (Ford and Taylor 2004; Raymond 2003a), Manor Farm, Horton (Raymond 2003b) and Charvil, Berkshire (Lovell and Mephram 2000). It is possible that the emergence of decoration in the Heathrow area is concordant with a*

*shift in depositional focus: the only contexts containing definite Decorated Bowl occur on the east of the excavations, in areas where Middle Neolithic Impressed Wares replace Early Neolithic Bowls in pit sequences. The best parallels for the Heathrow T5 Decorated material come from the middle and upper Thames, at Whiteleaf Hill, Buckinghamshire, some 25 miles to the north-west (Childe and Smith 1954, fig. 5) and Abingdon, Oxfordshire (Avery 1982, fig. 15).*

*Herne argues that the emergence of decoration in the Early Neolithic ceramics of the English south-east is a late development (Herne 1988). However, two points should be considered in any consideration of the chronological significance of this material: firstly, the assemblage is quite small and fragmentary; and secondly, decorated vessels did not necessarily replace plain ones. Whittle (1977) has typified the ratio of decorated to plain vessels in assemblages of his Decorated Style (within which the Heathrow T5 material would lie) as 3:7. Given these factors, it is not possible to determine whether the very low proportion of decoration is necessarily a chronological trait, rather than a deliberate choice by the users of the pottery.*

*It has been argued that some assemblages in the locality represent a distinct and new regional style (Kinnes 1991, 158), or that the differences perceived in each newly-excavated assemblage represent a strongly regional character to the Early Neolithic ceramics of the region (Robertson-Mackay 1987, 92). Both of these suggestions fit with the general recession of relevance of the traditional generalising culture-historic schemes of categorising Earlier Neolithic pottery. Instead of attempting to fit the Heathrow T5 ceramics into a Mildenhall or Abingdon cultural tradition, or an Eastern or Decorated one, we should instead see the vessels as locally-adopted solutions to particular sets of needs. The resulting assemblages will have similarities and differences to other local and regional assemblages manufactured by the same people, their contemporaries, forebears or descendants, as solutions to other sets of needs. The possibility of different depositional activities involving different types of ceramics and contexts (plain bowls in tree throws towards the cursus; Decorated vessels and later Impressed Wares in pit sequences*

further east) indicates that those needs may not have been simply utilitarian. Sadly, the lack of suitable material precluded direct dating of these two styles, and their precise chronological relationships at Heathrow T5 are therefore unknown.

(Leivers with Every and Mephram, CD Section 1)

### Peterborough Ware 3400 (and possibly earlier)–2500 BC

Radiocarbon dating has established a currency for Peterborough Ware ceramics c 3400–2500 BC (Gibson and Kinnes 1997). However, there are an increasing number of radiocarbon dates which suggest that Peterborough Ware pottery was in use prior to 3400 BC. For example, dates from the Drayton North Cursus in the Upper Thames, which suggest the monument was constructed between 3620 and 3390 BC, were associated with Peterborough Ware (Barclay *et al.* 2003, table 8.1, 184). In Kent, the residue attached to a sherd of the Ebbsfleet style of Peterborough Ware from Ebbsfleet produced a date of 3640–3370 cal BC (NZA-29079 4723+/- 35BP) (Barclay and Stafford 2008). This date ‘approximates well to the suggested range of 3550 to 3350 cal BC for this style of pottery’ (*ibid.*). Closer to Terminal 5, two radiocarbon dates (OxA-4057 and OxA-4058) from the primary fills of the Staines Road Farm, Shepperton (Surrey) ring ditch cover the period 3640–3100 and 3780–3350 cal BC respectively (Jones 2008, 73). The author suggests that the Peterborough Ware pottery associated with these dates ‘may be the earliest reliably dated Peterborough Ware...’ (Jones 2008, 74; *op cit.* Barclay and Stafford 2008). However, the presence of carinated and uncarinated plain Neolithic pottery within the assemblage (Jones 2008, 28) suggests an earlier phase of activity at this site.

At Imperial College Sports Ground to the north-east of Terminal 5, recent dates from cremations from within two ring ditches associated with Peterborough Ware centre on c 3000 BC (A. Barclay pers. comm.). Within the Terminal 5 assemblage:

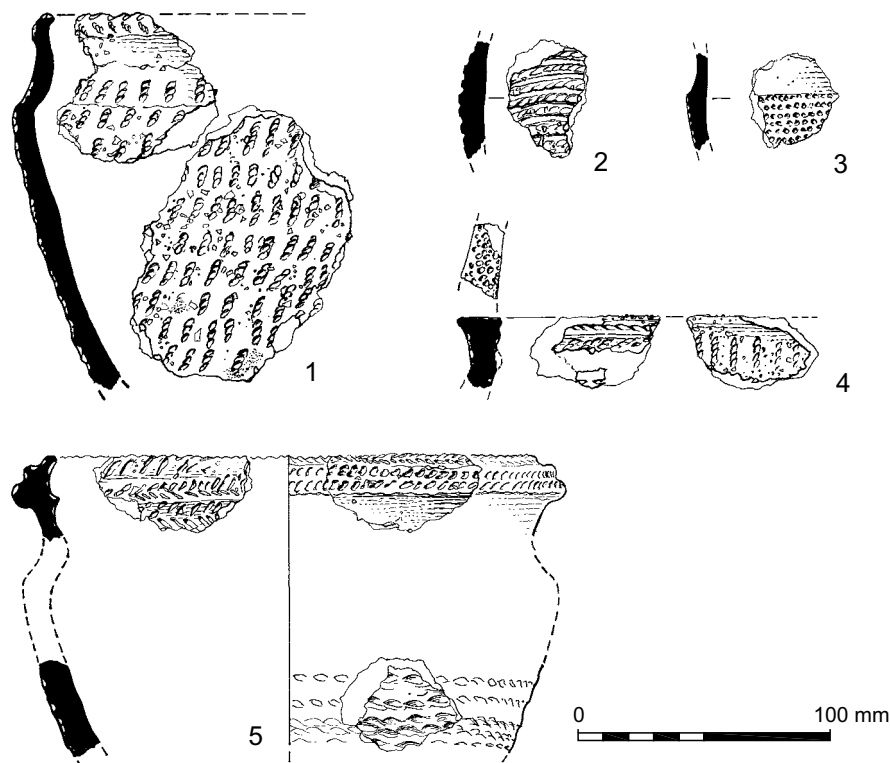


Figure 2.5: Middle Neolithic Peterborough Ware pottery. 1. Ebbsfleet bowl; fabric FL23. PRN WA-335 and WA-336, PSH02, context 555930, pit 555922 (deliberate backfill); 2. Body sherd; fabric FL20. PRN WA-345, PSH02, context 585009, Stanwell Cursus (secondary fill); 3. Shoulder sherd; fabric FL20. PRN WA-312, PSH02, context 527113, pit 527124 (secondary fill); 4. Rim; fabric FL21. PRN WA-325, PSH02, context 527114, pit 527124 (secondary fill); 5. Mortlake bowl; fabric FL22. PRN WA-320 and 321, PSH02, context 527113, pit 527124 (secondary fill).

Middle Neolithic Peterborough Wares were represented by 451 sherds weighing 2,563g in five flint-tempered fabrics (FL19 – FL23) (Fig. 2.5). All appear to be of local manufacture. With the exception of a large portion of an Ebbsfleet-type bowl from pit 561278 (Fig. 2.5, 1), the assemblage consisted of small fragments of Mortlake-type vessels. For the most part, vessels are too fragmentary to suggest forms.

In terms of distribution, Peterborough Wares were found across the site (see Fig. 2.13 below). At the very south in Area 28b a small number of sherds clustered around an opposed pair of terminals to segments of the ditches of the Stanwell Cursus. On the eastern ditch, the northern terminal contained a single fingernail impressed sherd in a distinctive ferruginous fabric (FL19), while the southern contained a single plain sherd in fine flint-tempered fabric FL20. This terminal cut an earlier pit which itself contained one rim, three body, two shoulder sherds in coarse flint-tempered fabric FL21, all with whipped cord maggots (the rim also has an incised line along the top and other incised impressions).

In the western ditch, the northern terminal contained a single sherd from a cavetto zone in FL21 with fingernail impressions on one surface and a whipped cord maggot herringbone on the other. The southern terminal contained two sherds in FL19, one (a cavetto fragment) with whipped cord maggots and a second probably from the same vessel with fingernail impressions.

A further sherd was recovered from the western ditch of the Stanwell Cursus in the centre of the excavation. This sherd (in FL20) has a series of very deep, rather coarse impressions which may be twisted cord forming at least six pronounced ribs (Fig. 2.5, 2). This type of decoration is paralleled elsewhere at Heathrow (Grimes 1960, 191 and fig. 77 nos. 9–11). A single plain sherd in FL21 was recovered from the eastern ditch at the extreme north of the excavations.

In the north-east corner of the excavations, pit 555922 in Neolithic Pit Complex 1 contained 40 sherds of an Ebbsfleet-type bowl (Fig. 2.5, 1), heavily encrusted with residues. With the exception of a very small number of featureless sherds, this Ebbsfleet

vessel is the only instance of fabric FL23, suggesting that—while no doubt contemporary with the other Peterborough Ware styles—Ebbsfleet-type vessels do form a distinct sub-set of Peterborough ceramics. The vessel was represented by 32 body, five rim and three shoulder sherds, with fingernail impressions on the body (the sherds are abraded and many obscured with a heavy deposit, but some at least have all-over decoration), above the shoulder in the neck and on top of rim. Earlier pits in the sequence contained single flint tempered sherds that cannot be accurately identified, but which probably derive from similar vessels.

Immediately to the north, Neolithic Pit Complex 2 contained both Early and Middle Neolithic ceramics. In this instance, pit 561277 containing Early Neolithic bowl sherds was cut by pit 561278 containing fragments of one or two Mortlake vessels. The distinction between the two pit complexes in terms of the style of Peterborough Ware they contain is very marked.

South of these pit groups, ditch SG 547363 contained small portions of three vessels, including 14 sherds of a vessel in FL22 (one with a very deep fingertip impression), a sherd in FL21, and two in FL19.

Other widely scattered Middle Neolithic features contained contemporary ceramics. Immediately north of the C3 Cursus, ditch SG 561136 contained a single sherd in FL19, while pit 527124 (the uppermost pit in a sequence of intercutting features) contained fragments of four vessels. One (in FL20) was represented by a single sherd with fingernail impressions on the oxidised exterior, while a second necked sherd in the same fabric had a smoothed exterior decorated with rows of impressions below the neck possibly made with the end of a bird bone (Fig. 2.5, 2). The other two vessels were present in much larger proportions: 69 sherds of a vessel in FL21 included some with fingernail impressions, and one with a row of twisted cord either side of a blank 'panel'. The three rim sherds from this vessel were 'T'-sectioned and flat topped, with the top, outer and inner surfaces all decorated with fingernail impressions. On the inner surface these were between raised ridges (Fig. 2.5, 4). The fourth vessel was represented by 138 sherds in FL22. Some sherds were plain, while others had fingernail decoration. The rim was an elaborate

'T'-shape, with fingernail and stick or bird bone impressions (Fig. 2.5, 5). Hedgerow 527115 cut this pit group and also contained Mortlake sherds, which may have derived from one of the earlier pits. Nearby, tree-throw 561096 contained a pair of featureless body sherds in FL23.

Further north, pit SG 561075 contained 29 sherds in FL22, one of which had an inturned rim with three rows of circular impressions on the top and three rows of possible bird bone impressions on the interior surface. The remaining sherds were mostly plain, although one (possibly a shoulder) has two lines of circular impressions. Two sherds in FL20 including a rim with whipped cord maggots on the top and fingernail impressions below were residual in Middle Bronze Age ditch 556014 in this area. Other featureless sherds came from the fills of later pits and ditches across the excavated areas.

(Leivers with Every and Mephem, CD Section 1)

### Grooved Ware 3000–2000 BC

The ceramic sequence at Terminal 5 continues with the use of Grooved Ware. The overall currency of this ceramic tradition in southern Britain, based on radiocarbon dating, falls c 3000–2000 BC (Garwood 1999, 152).

Although across southern Britain as a whole there appears to be some chronological overlap between Peterborough Ware and Late Neolithic Grooved Ware, in West London the two are rarely found in the same contexts, the HE2 enclosure at Terminal 5 being an exception. In this region, Grooved Ware is most frequently found deposited with lithics and often with charred plant remains such as hazelnuts and crab-apple pips, suggesting a ritual autumnal deposition. At Terminal 5, Grooved Ware was recovered from a small number of pits, but without the correspondingly rich deposits of organic and lithic material found elsewhere. Turning to monuments associated with Grooved Ware, large henge monuments are conspicuously absent from the Middle Thames around London. It has been suggested (eg Framework Archaeology 2006, 38)

that, small circular or hengiform monuments were constructed during this period. For example, a ring ditch at West Bedfont (approximately 600 m north-west of the large double ditched enclosure; see Fig. 2.1) was originally investigated in 1971 (Farrant 1971). It was subsequently re-excavated in 1996, when six sherds of Grooved Ware pottery were recovered from the uppermost fills of the ditch (Wessex Archaeology 1997). However, there are no convincingly unequivocal examples of the construction of these small monuments being associated with Grooved Ware, as our excavations of the HE2 enclosure at Terminal demonstrate.

Late Neolithic pottery is not common in the Heathrow area: only 564 sherds weighing 2438g were recovered during the T5 excavations (Fig. 2.6). To some degree, identification is hampered by a dependence on fabric type, and the similarity of Late Neolithic and Early Bronze Age fabrics, but the combination of fabric and characteristic decoration indicates two grog-tempered groups, which break down into a division of more or less vesicular (GR5 and GR2 respectively).

The majority of sherds came from three features on the eastern side of the excavations (see Fig. 2.56 below). Pit 695027 contained eight small sherds from two vessels in its lower fill, one in GR2 and one in GR5... Pit 708007 contained a second pair of vessels in its single fill. As with 695027, there was an example of each fabric type, with 76 sherds in GR5 and 48 in GR2. It is possible that the sherds in both pits derive from the same pair of vessels...

The GR5 vessel has an asymmetrical rim with a slight convex external collar, from which depends a series of vertically grooved applied cordons (at least two, probably more). The small fragments of flat base suggest a slight protruding foot. The decorative scheme is complex, but basically consists of the upper portion of the body divided into panels infilled alternately with incised herringbone and impressed fingertip decoration (Fig. 2.6, 8). Below both is a horizontal panel of incised parallel lines above a zone with only intermittent and less well-executed herringbone incision. The wall is thin throughout (never more than 10mm).

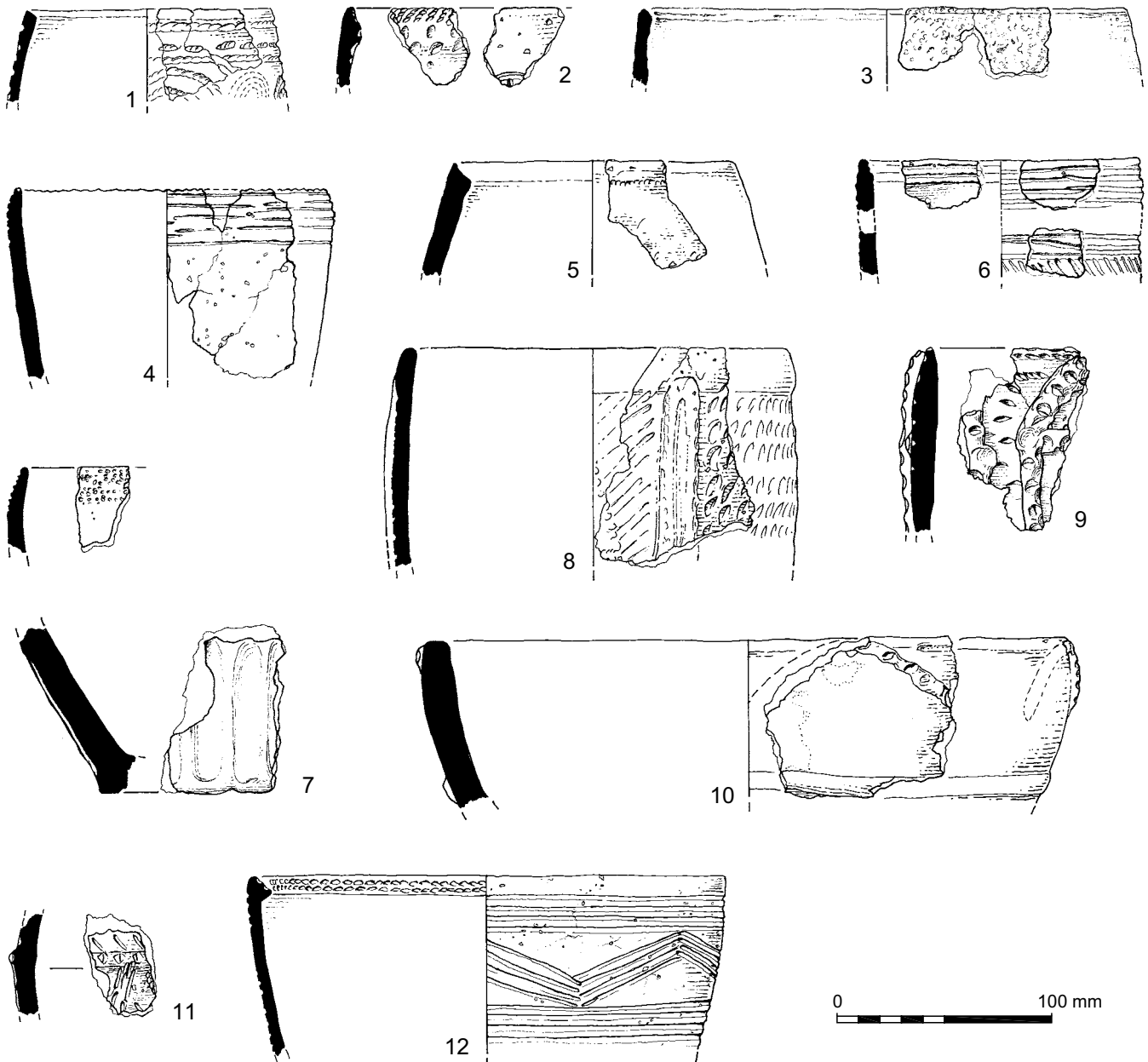


Figure 2.6: Late Neolithic Grooved Ware pottery. 1. Rim; fabric GR5. PRN WA-579 and 580, PSH02, context 531013, pit 531011 (deliberate backfill); 2. Rim; fabric GR5. PRN WA-582, PSH02, context 531015, pit 531011 (deliberate backfill); 3. Rim; fabric GR5. PRN WA-588, PSH02, context 531022, pit 531011 (placed deposit); 4. Grooved Ware rim; fabric GR2. PRN 2709, GAI99, context 216120, pit 216009/216118; 5. Rim; fabric GR2. PRN WA-590, PSH02, context 559505, ditch 559506 (secondary fill); 6. Rim; fabric GR2. PRN WA-575 and 576, PSH02, context 517174, ditch 517173 (secondary fill); 7. Grooved Ware vessel; fabric GR2. PRN WA-591 and 592, PSH02, context 561105, pit 561104 (secondary fill); 8. Grooved Ware vessel; fabric GR5. PRN WA-4291, TEC05, context 708008, pit 708007 (fill); 9. Rim; fabric GR2. PRN WA-597. PSH02, context 580311, pit 580310 (secondary fill); 10. Rim; fabric GR2. PRN WA-596. PSH02, context 580311, pit 580310 (secondary fill); 11. Body sherd; fabric GR2. PRN WA-600, PSH02, context 615116, ditch 615115 (secondary fill); 12. Grooved Ware vessel; fabric GR5. PRN WA-35, 36 and 37, TEC05, context 836010, pit 836009.

The GR2 vessel is more fragmentary, and generally less well-preserved, but it appears to have had a simple upright rim, below which was a zigzag pattern of broad incised lines covering much of the body. There does not seem to have been any division of the surface into panels. The base appears to have been flat. Both of these vessels are Durrington Walls-type.

Pit 836009 contained 96 sherds (275g) forming approximately 65% of the rim of a vessel 280mm in diameter (Fig. 2.6, 12)... Externally, the vessel has a band of four

horizontal incised lines above and below a panel of four lines of zig-zag. This vessel most probably belongs to the Clacton type.

Pit 580310 contained large rim sherds from a pair of vessels in a variant of GR2, the form and decoration of which indicate the Woodlands sub-style (Fig. 2.6, 9–10). Both have sinuous raised cordons with slash-marks. At points along these cordons on one vessel (in one instance at the convergence of two cordons) are larger impressions apparently made with a

finger end – these may replicate the more elaborate applied ‘stops’ at the convergence of cordons on more typical Woodlands vessels. The atypical feature of these sherds is the presence of two lines of twisted cord impressions below the rim of one (Fig. 2.6, 9), suggesting a Woodlands/Durrington Walls hybrid.

Slightly further to the west, 97 sherds from three vessels in GR5 were recovered from pit 531011 (9 sherds of one vessel in fill 531013 (Fig. 2.6, 1); 22 sherds of a second vessel (Fig. 2.6, 2) spread between fills

531015 and 531019; 66 sherds of a third vessel in fill 531022 (Fig. 2.6, 3)). All were burnt and extremely friable.

Another sizeable group came from pit 216009/216118 (respective secondary fills 216011 and 216120 (Fig. 2.6, 4); 41 sherds: 134g); sherds from 216011 were noticeably more abraded than those from 216120, which almost certainly derived from the same vessel. Diagnostic sherds include part of the rim with horizontal grooved decoration below (Fig. 2.6, 4). This appears to be a relatively thin-walled, bucket-shaped vessel, with a simple rounded rim. Form and decoration are sufficient to assign this vessel to the Durrington Walls sub-style.

The majority of the identifiable vessels belong to this same sub-style (Wainwright and Longworth 1971, 240–2). Here, the characteristic traits are whipped and twisted cord (Fig. 2.6, 1 and 5); internally-bevelled and concave rims, often with incised decoration below (Fig. 2.6, 6); vertical plain cordons (Fig. 2.6, 7) and external incised or grooved decoration (Fig. 2.6, 1, 2 and 6). Much of the material derives from a series of closed vessels, although very few profiles can be reconstructed. In addition to those already described, a further 10 sherds with grooved decoration from other contexts (pits 127022, 141228, 170007; ditches 146205 and 961747) are also probably of the same sub-style, although too small to make a definitive identification. The remaining sherds are plain and undiagnostic.

(Leivers with Every and Mephram, CD Section 1)

### *Beaker and Collared Urn c 2500/2400–1700 BC*

The chronology of Beaker ceramics has been discussed in detail elsewhere (eg Kinnes *et al.* 1991; Case 1993; Needham 2005), and here our main concern is the relationship between Grooved Ware and Beaker ceramics. A review by Garwood (1999) has concluded that there is little overlap between the two and argues that Beaker funerary deposits in southern Britain belong to the period after c 2500/2400 BC and persist until 1700 BC (also Needham 1996, 124).

Collared Urns emerged at around 2050 cal BC and lasted until c 1500 cal BC (Needham 1996, fig. 2). However, reliable radiocarbon dates for Collared Urns are rare and there is insufficient evidence to demonstrate continuous development from Fengate Ware (Gibson and Kinnes 1997; Gibson 2002, 96).

Early Bronze Age pottery remains elusive, with only 156 sherds weighing 846g identified (still predominantly on the grounds of fabric alone). All sherds are grog-tempered, and have been assigned to two fabric types (GR1 and GR9). While the fabrics are visually very similar to the Grooved Ware fabric GR2, sherds in GR1 and GR9 are invariably oxidised, at least externally, and the few recognisable sherds are characteristic of Early Bronze Age ceramic traditions. Diagnostic sherds include rim and collar fragments from Collared Urns, and rims and comb-impressed body sherds from Beakers. The remaining sherds are all plain body sherds; some are tentatively identified as Beaker or Collared Urn where they are visually identical to diagnostic sherds.

Sherds are widely scattered across the site, usually in very small quantities (Fig. 4). Condition overall is poor: with the exception of the material from pit 707016 sherds are very small and abraded with a mean sherd weight of only 2.99g and only one context producing more than 30g of pottery.

The diagnostic Beaker sherds came from a primary ditch fill (ditch recut 105009), from pit 588271 (dated to the Early Bronze Age), and from a ring ditch (possibly a round barrow) 544182. Collared Urn was recovered from the same ring ditch, and also from ditch 511058, tree-throw 570144, in Middle Bronze Age waterhole 544085, and in Neolithic pit 527124.

In all these contexts sherds can be regarded as residual finds, with the exception of the single sherd from the upper fill of the Stanwell Cursus ditch, eight sherds from ditch 511188, ten from 588271 and six from ditch 594103. The Beaker and Collared Urn sherds (six sherds; 12g) from ring ditch 544182 and pit 588271 are highly abraded and unlikely to be in situ, although the occurrence in 544182 of these otherwise-rare ceramic types in association

with at least one contemporary lithic tool does seem to point to contemporary activity in the vicinity, which may have been associated with this putative barrow.

On TEC05 the situation is rather different. Only one context contained Early Bronze Age ceramics (pit 707016), but the group consisted of 51 sherds weighing 509g, all from a single large Collared Urn. This group appears to have been in situ, and probably represents discard of a broken vessel.

(Leivers with Every and Mephram, CD Section 1)

### *Conclusion of ceramic technology*

In the absence of radiocarbon dates, the relative ceramic chronology described above will be used when outlining the Neolithic to Early Bronze Age narrative. The continuing efforts to refine Neolithic chronology in general, and ceramic chronology in particular, are extremely important if our understanding of the period is to improve.

We will now turn to the chronological narrative of inhabitation of the Heathrow landscape, and commence with the Palaeolithic period.

### **Palaeolithic occupation (400,000– 9500 BC)**

The Terminal 5 excavations have added a small number of lithic artefacts to the Lower Palaeolithic material collected at Perry Oaks (Framework Archaeology 2006, 39).

The Lower Palaeolithic period is represented by one handaxe from a land drain on WPR 98 (context 100000) and one Levallois flake from PSH 02 (area 61, LBA/EIA waterhole 516082). Several possible but uncertain Palaeolithic pieces were also recovered. These pieces are technologically undiagnostic, but were isolated on account of their deep iron-staining and heavily rolled condition.

Using these criteria, additional pieces of possible Palaeolithic origin include an end scraper made on a non-flake blank from GAI 99 (area 1B, MBA ditch 214015) and

a piercer from WPR 98 (topsoil 100000). A few stray flakes of highly speculative Palaeolithic date were also recovered from the following SG deposits: 216064 (GAI 99 area 1A, LBA pit), 100000 (WPR 98, topsoil), 502001 (PSH 02 area 49, topsoil), 502002 (PSH 02 area 49, subsoil), 512059 (PSH 02 area 49, eastern cursus ditch), 528129 (PSH02 area 77, ditch recut 510190), 529135 (PSH 02 area 49, medieval waterhole 529139), 551195 (PSH 02 area 34, voided context) and 581170 (PSH 02 area 77, LBA/EIA waterhole 581168).

Without exception, these isolated pieces occur as residual finds in much later deposits and, given their heavily rolled and iron-stained condition, probably originate from the gravels. While they indicate that the wider area was occupied by human groups in the Palaeolithic period, their contribution to a discussion of Palaeolithic activity in the west London area, otherwise well-documented (eg Wymer 1968; Wymer 1991; Lewis 2000), is somewhat limited.

(Cramp and Leivers, CD Section 4)

This small collection does little other than to reaffirm the presence of artefacts in the Taplow gravel deposits. Upper Palaeolithic artefacts from Terminal 5 are even scarcer.

Context 579132 (PSH 02 area 49, medieval gully 579154) contained a possible long blade, heavily iron-stained, which is the only piece that could indicate a late Upper Palaeolithic presence at Heathrow T5. Material of this date is very scarce in the area, although Healey and Robertson-Mackay note 'a possible graver of late Upper Palaeolithic type' from the Yeoveney Lodge causewayed enclosure at Staines (1987, 95), and a small number of large blades (some retouched) and a single core with long blade affinities were recovered from Kingsmead, Horton (Leivers 2005).

(Cramp and Leivers, CD Section 4)

The absence of late Upper Palaeolithic material from the gravel terraces is in contrast to the pattern of the floodplain of the Colne valley, where sites such as Church Lammas (Jones 1995), Three Ways Wharf, Uxbridge (Lewis 1991; Lewis *et al.* 1992; Lewis in prep.), and

Horton (see above) furnish us with analogies for the kind of inhabitation we might expect in the immediate area. These sites were characterised by distinctive late Upper Palaeolithic long-blade lithic technology used by the first reindeer hunters to re-colonise major river courses from a North Sea Basin that was dry and habitable at that time. It is perhaps unsurprising that we have retrieved no long-blades from Heathrow, as these hunting bands were probably merely passing through the area, following the migrating herds

that were most populous in the valley networks. As such, these people would have had little material need to venture up on to the terrace. Even if they had, the effects of recent agriculture and development would have destroyed any lithic scatters that may have existed.

The Terminal 5 excavations can therefore add very little to our understanding of the Palaeolithic occupation of the area, and it is the Mesolithic period that we next turn our attention.

Period	Interpretation	Feature	Site Code	Entity	
Mesolithic	Tree-throw	555539	PSH02	-	
Late Mesolithic	Pit	120028	WPR98	Complex of burnt-flint pits in and near C1 Cursus	
	Pit	137021	WPR98		
	Pit	159025	WPR98		
	Pit	160021	WPR98		
	Pit	162010	WPR98		
	Pit	165003	WPR98		
	Pit	165005	WPR98		
	Pit	165007	WPR98		
	Pit	165009	WPR98		
	Pit	524218	PSH02		
	Pit	524220	PSH02		
	Pit	524224	PSH02		
	Pit	555536	PSH02		
	Pit	578138	PSH02		
	Pit	801012	BCU02		Pit, post and stakehole complex at Bedfont Court
	Pit	807017	BCU02		
	Posthole	801076	BCU02		
	Posthole	807023	BCU02		
Posthole	807024	BCU02			
Stakehole	806028	BCU02			
Stakehole	806030	BCU02			
Stakehole	806032	BCU02			
Mesolithic or Neolithic	Palaeochannel	588343	PSH02	-	
	Pit	122084	WPR98		
	Pit	178054	WPR98		
	Pit	621094	PSH02		
	Tree-throw	120072	WPR98		
	Tree-throw	122086	WPR98		
	Tree-throw	163135	WPR98		
	Tree-throw	172081	WPR98		
	Tree-throw	525481	PSH02		
	Tree-throw	527229	PSH02		
	Tree-throw	532033	PSH02		
	Tree-throw	592048	PSH02		
	Tree-throw	651024	PSH02		

Table 2.4: Mesolithic and possible Mesolithic features



## Mesolithic geographies

The Colne floodplain has a rich archaeological record of human inhabitation during the Mesolithic (Lacaille 1963; Lewis 1991; Lewis *et al.* 1992, fig. 22.1). It has become clear that the floodplain contains (in areas where deposits remain *in situ*) a relatively dense pattern of lithic scatters, sometimes with associated faunal remains dating from the final stages of the late glacial period to the Late Mesolithic. These scatters are often well preserved in the fine grained alluvial deposits of the Colne. For example, the Early Mesolithic occupation at Three Ways Wharf Uxbridge centred on hunting red and roe deer—sylvan species suited to such an ecology—as well as swan (Lewis *et al.* 1992). The people who hunted these animals had adapted their technologies and inhabitation strategies to suit their needs and to the local ecology. They probably restricted their movements to smaller territories than their reindeer-



Plate 2.1: Artist's reconstruction of Mesolithic pits in use at Terminal 5



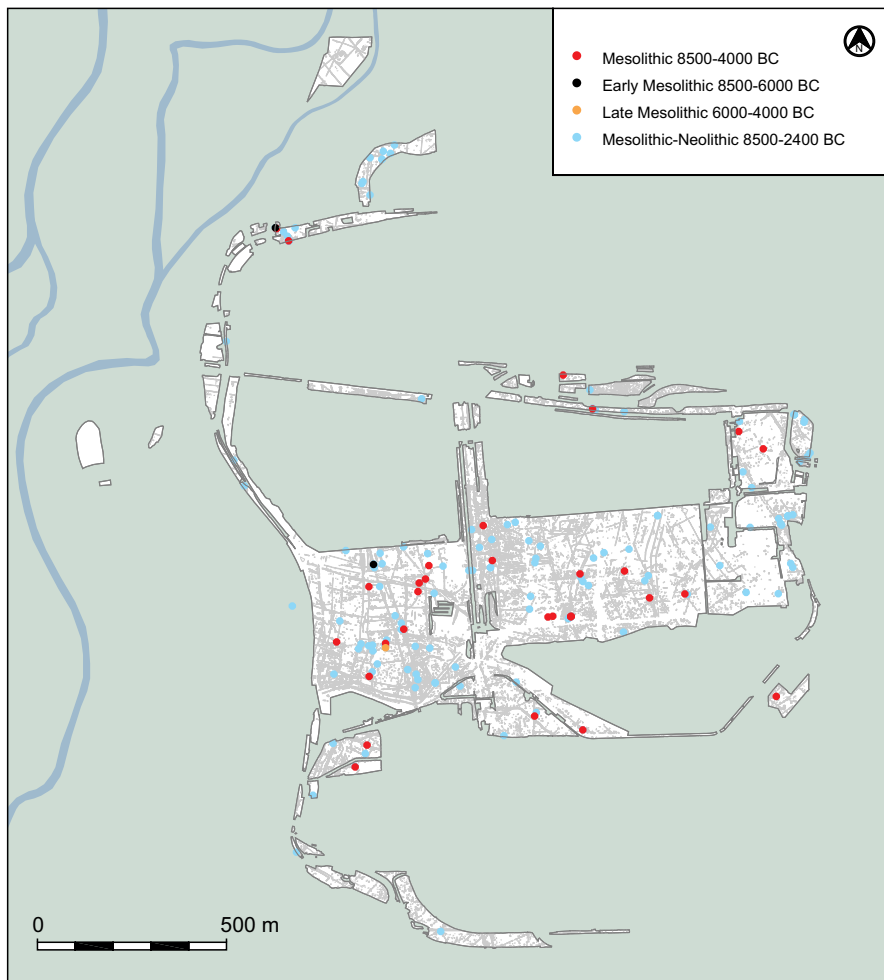


Figure 2.7: Distribution of Mesolithic and Mesolithic/Neolithic flintwork in later features

hunting predecessors and were, as such, the first post-glacial residents of the Colne and Heathrow landscape. The pollen data from Three Ways Wharf (ibid.) shows that the Boreal landscape consisted of a sedge/reed swamp with the valley sides populated by pine, oak, hazel, birch and elm.

In contrast, evidence of human occupation of the Heathrow Terrace has come from lithic material which has been recovered from the archaeological excavation of later prehistoric and historic period features and deposits. Centuries of agriculture and the harsher depositional environment of the gravel and brickearth subsoil has resulted in a much poorer record of human inhabitation away from the Colne floodplain. This bias is not confined to Heathrow, but can be seen across Greater London generally (Lewis 2000, 49–50; map 2).

The past history of the Terminal 5 site has added difficulties in studying the

inhabitation of the Heathrow landscape. The construction of the sludge works and airport in the 20th century led to the removal of much of the topsoil and subsoil, and thus the major part of any lithic scatters that may have existed. The Mesolithic material that has been retrieved has come from later archaeological features (Figure 2.7). However, the absence of large lithic assemblages has meant that chronological refinement of the Mesolithic evidence is extremely difficult. For example, although a few artefacts may be typologically distinctive enough to assign to the Early or Late Mesolithic, the majority can only be attributed to the Mesolithic, or even more imprecisely to the Mesolithic or Neolithic.

Nonetheless, the presence of Mesolithic flintwork in later archaeological features does demonstrate a human presence across the western part of the Heathrow Terrace between 8500 and 4000 BC.

The taphonomy of Mesolithic flintwork as recovered from archaeological features of later periods has been considered in Volume 1 (Framework Archaeology 2006, 39–42) and will not be considered further here. Instead we will focus on the features (Fig. 2.8 and Table 2.4) which have been dated to the Mesolithic or the Mesolithic / Neolithic, usually on the basis of tentative artefactual evidence but also on the basis of thermoluminescence or radiocarbon dating. It is worth noting that in contrast to the dense lithic scatters encountered elsewhere on the Colne floodplain (eg the Early Mesolithic Scatter C West at Three Ways Wharf Uxbridge (Lewis 1991 and in prep), none of these features produced significant quantities of lithic artefacts.

Setting aside features which can not be dated closer than the Mesolithic or Neolithic, the remaining features date predominantly to the Late Mesolithic and occur in two locations: a cluster of shallow pits containing burnt flint situated within the C1 Stanwell Cursus, and a complex of stake and postholes situated on the Colne floodplain in Bedfont Court (see Plate 2.1 for artist's reconstruction of Mesolithic pits in use at Terminal 5).

### *Pit complex, c 7000–6500 BC*

The complex of shallow pits filled with burnt flint was reported in Volume 1 (Framework Archaeology 2006, 41–4). Further excavations have added more pits between 6 m and 35 m to the east of the eastern C1 Cursus ditch. An additional pit was recognised from the Perry Oaks excavations located within the C1 Cursus. In total 14 shallow pits were excavated (Table 2.4, Fig. 2.8). All contained burnt flint, and some contained fragments of burnt stone. Several of the pits (159025, 160021, 165005, 165007, 165009) also contained small quantities of chronologically undiagnostic flakes and broken blades. The condition of this material suggests that it was incorporated into the pits sometime after its manufacture.

Other features such as postholes and a cluster of stakeholes were excavated in the area of the pit complex, but all

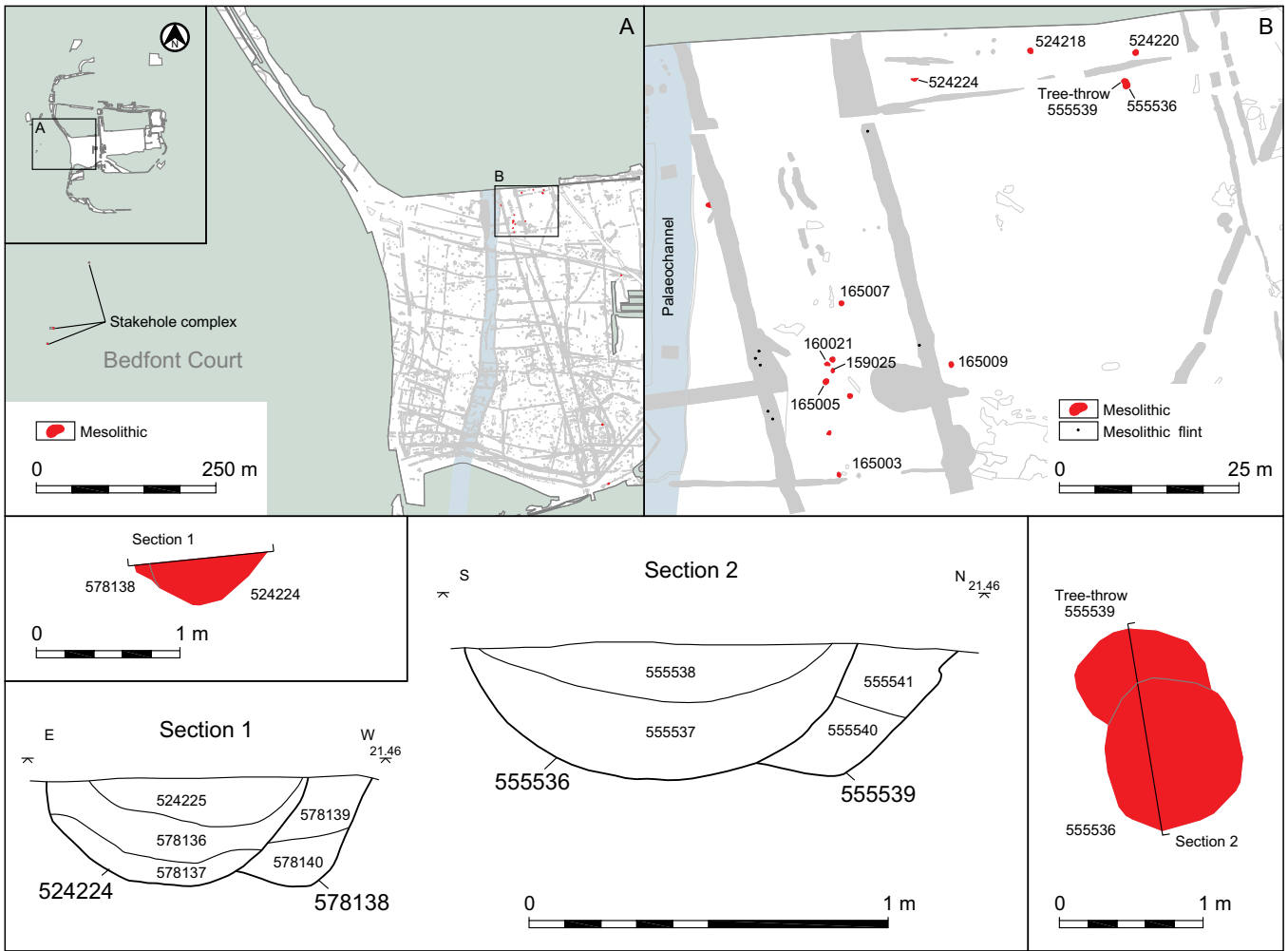


Figure 2.8: Late Mesolithic pit complex

were undated and thus impossible to associate with the pits. A total of eight thermoluminescence dates was obtained from seven of the pits from the WPR98 and PSH02 excavations (see Fig. 2.3 above and Table 2.5).

We can thus be very confident that the pits are Mesolithic in date, although refining the date of the occupation is more difficult. However, it is *probable* (at 68% probability) that the occupation dates to the period from the middle of the 8th to the middle of the 7th millennia BC and the late 7th to the middle of the 6th millennia BC. The lower end of the date range (middle of the 6th millennium BC) is approximately two thousand years before the construction of the Terminal 5 Cursus complex.

The dates provide no clarity for the length of occupation that produced the pits: whether they were dug during a single stay or over repeated visits. Two

pieces of evidence suggest the latter. Firstly, as already mentioned, the condition of the small lithic assemblage indicates that it had lain on the surface of the ground before becoming incorporated within some of the pits, suggesting more than one phase of activity. Secondly, pit 578138 was cut by another burnt flint-filled pit, 524224, again suggesting at least two phases of occupation (Fig. 2.8; Plate 2.2).



Plate 2.2: Mesolithic pit 524224

Feature	Upper date (BC)	Determination (BC)	Lower date (BC)	+/- (68% confidence level)
524220	5057	4527	3997	530
524224	6747	6057	5367	690
165005	6840	6210	5580	630
165007	7160	6460	5760	700
165005	7330	6750	6170	580
165009	7810	7180	6550	630
555536	7917	7157	6397	760
524218	8187	7347	6507	840

Table 2.5: Thermoluminescence dates from burnt flint pits

The pit complex was located approximately 10 to 20 m east of the course of a palaeochannel which flowed from north to south-west through the Terminal 5 excavations. The channel marked the boundary between the gravel terrace to the east and the start of the Colne floodplain to the west, and its presence would subsequently shape the architectural development of the landscape through later prehistory and into the medieval period.

However, although the course of the channel probably still ran with water and was at least wet and boggy, it is likely that the channel had largely silted up by the time the pit complex was in use (Framework Archaeology 2006, 43). We have no environmental evidence to allow us to reconstruct the landscape at the time, but there is some indication that the pit complex may have been located within a small woodland clearing. This evidence consists of pit 555536, which cut through an existing tree-throw 555539 (Plate 2.3). The tree-throw is undated, and may have been considerably older than the Late Mesolithic occupation, but it does hint at a very localised opening in the woodland canopy.

We can therefore envisage (during the 7th millennium BC?) a small clearing in the woodland canopy adjacent to a sluggish stream on the edge of the Colne floodplain. This would have been a favourable location between two different landscape zones with different resources and in close proximity to water. It would thus not be surprising if this became a focus for repeated occupation by hunter-gatherer groups. The nature of that occupation is more difficult to reconstruct, but the shallow pits filled with burnt flint may be the remains of 'earth ovens', where flint is heated to high temperatures and used to slowly roast joints of meat. The composition of the hunter-gatherer groups is unknown: were they a single family group that used this location for a short while each year, or was it a seasonal meeting place for several families to join together for feasting and other social events? We will never know, but it is likely that the repeated occupations would have resulted in burnt flint, charred and



Plate 2.3: Mesolithic pit 555536

discarded animal bone, upcast earth from the pits and burnt wood that would have accumulated over the years to form a low mound or midden, which in turn would have acted to reinforce the importance of the location as a focus in the landscape. The pits and possible midden are the first archaeologically visible human modifications of the landscape at Terminal 5. The low mound would have persisted as a physical entity in the landscape, and as we will see in the following sections, appeared to have had an influence on the construction of the C1 Stanwell Cursus.

### ***Stake and posthole complex at Bedfont Court, c 6000 BC***

Our second focus of occupation is located on the Colne Floodplain at Bedfont Court, 670 m to the SSW of the burnt flint pit complex (Fig. 2.9). The remains consist of three postholes (801076, 807023 and 807024) and a pit (807017) aligned north-south. Five stakeholes arranged in a 'T' shaped pattern were situated 22 m to the NNE. Finally, 102 m to the north-east of the 'T' shaped array of stakeholes was a single pit (801012). All these features cut a calcareous tuffa deposit (807016) and were in turn sealed by a further tuffa deposit (807015). A sample from a waterlogged stake of unidentified species from feature 807024 gave a radiocarbon date of 6240–5990 cal BC (WK-11773: 7264 ± 69 BP: 95.4% confidence). If the other features are contemporary (and the stratigraphic relationships with the tuffa deposits suggest they broadly are) then the Bedfont Court complex would appear to date to the very end of the 7th millennium BC, perhaps 500 to 700 years later than the pit complex near the C1 Cursus.

The Bedfont Court complex was detected in trial trenches and test pits, and would probably have been more extensive. If the locations of the postholes and stakeholes are mapped against the topography of the surface of the underlying Colney Street gravels, it is clear that the complex is located along the edge of a gravel island on the Colne floodplain. We must assume therefore that at some time around the end of the 7th millennium BC, the tuffa deposits that had formed on and around this island stabilised and dried out sufficiently to allow occupation, before another sequence of tuffa deposition commenced. What sort of structures the postholes and stakeholes formed is uncertain due to the limited nature of the excavation. However, they could represent a series of shelters such as that excavated at Broom Hill in Hampshire (Selkirk 1978). Alternatively, they could represent fishing or hunting apparatus at the edge of active stream channels.

Whatever their use, it is clear that the activity would have been a very different setting to the pit complex on the edge of the Colne floodplain discussed above. The Bedfont Court environment would have been one of shifting channels and low gravel islands on a wet floodplain, whereas the gravel terrace would have been predominantly covered by deciduous Boreal woodland.

Evidence from Three Ways Wharf Uxbridge suggests that there were major changes to the environment of the Colne valley during the 7th millennium BC (Lewis *et al.* 1992). Palynology showed that sedge swamps formed on the Colne floodplain during the Boreal period (Zones V/Va to Vc; c 8200 to 6000 BC), and many other instances of peat and organic deposits broadly dated to this period in the Colne valley have been recorded over the years (*ibid.*). In addition, high concentrations of microscopic charcoal in the sedge swamp deposits at Three Ways Wharf suggested that widespread burning of the forest and sedge swamp itself occurred throughout this period, although an anthropogenic origin was difficult to prove (*ibid.*). A similar pattern of increasing charcoal content

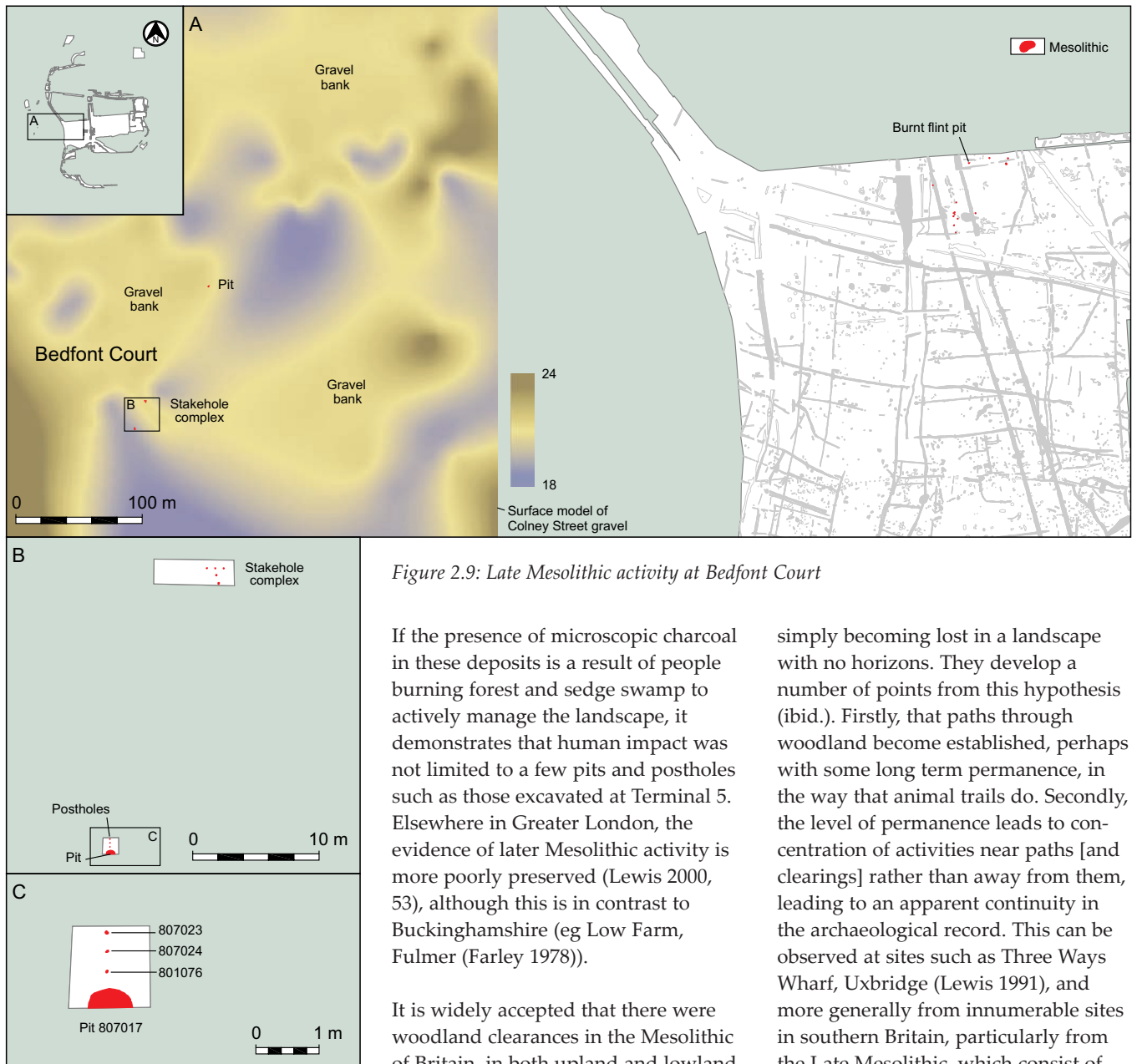


Figure 2.9: Late Mesolithic activity at Bedfont Court

If the presence of microscopic charcoal in these deposits is a result of people burning forest and sedge swamp to actively manage the landscape, it demonstrates that human impact was not limited to a few pits and postholes such as those excavated at Terminal 5. Elsewhere in Greater London, the evidence of later Mesolithic activity is more poorly preserved (Lewis 2000, 53), although this is in contrast to Buckinghamshire (eg Low Farm, Fulmer (Farley 1978)).

It is widely accepted that there were woodland clearances in the Mesolithic of Britain, in both upland and lowland settings, and whatever the debate about their anthropogenic origins, it is also accepted that they were used for food procurement by Mesolithic people. However, as with much of the Mesolithic period, this reduces human agency to the level of economic interaction with the environment and an overriding concern with procurement strategy. In a recent paper, Davies *et al.* (2005) have raised several important points which seek to re-situate human agency and society within a landscape of Mesolithic clearings and pathways. They propose that one of the primary reasons for establishing paths through forests may have been a level of fear of the woodland surroundings, whether of animals, spirits or

simply becoming lost in a landscape with no horizons. They develop a number of points from this hypothesis (*ibid.*). Firstly, that paths through woodland become established, perhaps with some long term permanence, in the way that animal trails do. Secondly, the level of permanence leads to concentration of activities near paths [and clearings] rather than away from them, leading to an apparent continuity in the archaeological record. This can be observed at sites such as Three Ways Wharf, Uxbridge (Lewis 1991), and more generally from innumerable sites in southern Britain, particularly from the Late Mesolithic, which consist of repeated scatters of lithic material often over a long time scale. For example, the site at West Heath, Hampstead contained earlier and later Mesolithic microliths, suggesting several phases of occupation (Collins and Lorimer 1989). Thirdly, the concept of 'wilderness' must be considered in the Mesolithic, rather than regarding environment as a backdrop or as inherently benign. Finally, some clearings may be created as purely social phenomena, for example clearings emerging where paths meet as corners are cut. Thus clearings may have been created / maintained for purely social reasons, to keep paths open and maintain a buffer against the woodland around rest sites (Davies *et al.* 2005, 286).

of sediments was also observed in the Lea Valley at Enfield Lock (Chambers and Mighall 1991) and it is clear that not only the Colne, but other tributaries of the Middle and Lower Thames were undergoing similar changes. At Meadlake Place, Egham (approximately 6 km SSW of Terminal 5), palaeoecological evidence suggests a reduction in forest cover accompanied by burning and cereal cultivation sometime during the Late Mesolithic / Early Neolithic transition. Furthermore, increased rates of deposition of mineral rich sediment suggest that this activity led to erosion and redeposition of sediments (Branch and Green 2004, 12).

It is against this framework that we can consider the evidence from Terminal 5. We have shown how the slight evidence for structures at Bedford Court and the distribution of Mesolithic flintwork from later features at Terminal 5 demonstrates human activity on the Colne floodplain and the Heathrow gravel terrace. By analogy with other sites, it is possible that greater landscape changes, in the form of burning of the woodland from c 8000 BC onwards, was also occurring. The evidence of the burnt flint filled pits at Terminal 5 implies that a certain awareness had dictated some highly structured activity at that specific location. Slight though these remains are, their significance lies in the fact that in the 7th or 6th millennia BC, a community had marked a significant place in the landscape by digging into the surface of the earth, piling up the residue and filling the void with culturally derived material. These activities had now become incorporated in the permanence of the place. The practice of breaking the ground and processing the earth in a way that explicitly realised human intent, operating within a structure defined by the natural topography and a geography of clearances and places linked by pathways, was to give rise to the inscription of a monumental landscape that pre-figures the Neolithic.

### Trends in landscape changes in the 4th and 3rd millennia BC

We have previously discussed how the lithic assemblages are not chronologically distinctive enough to be used to differentiate late 5th and early 4th millennia activity from that associated with the monumental landscape. The earliest ceramics (carinated bowl) are absent from Terminal 5, whilst Plain Bowl Ware pottery would have been in circulation prior to and during the construction of the cursus monuments. Despite these obstacles, we can study landscape change at a broad level during the 4th and 3rd millennia, using the relative pottery chronology to quantify the frequency of different archaeological features through this period, and make inferences on the nature of human activity.

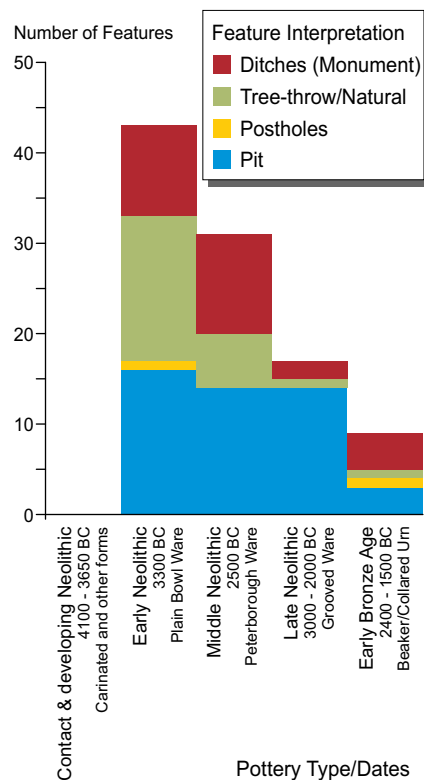


Figure 2.10: Neolithic and Early Bronze Age pottery by feature type

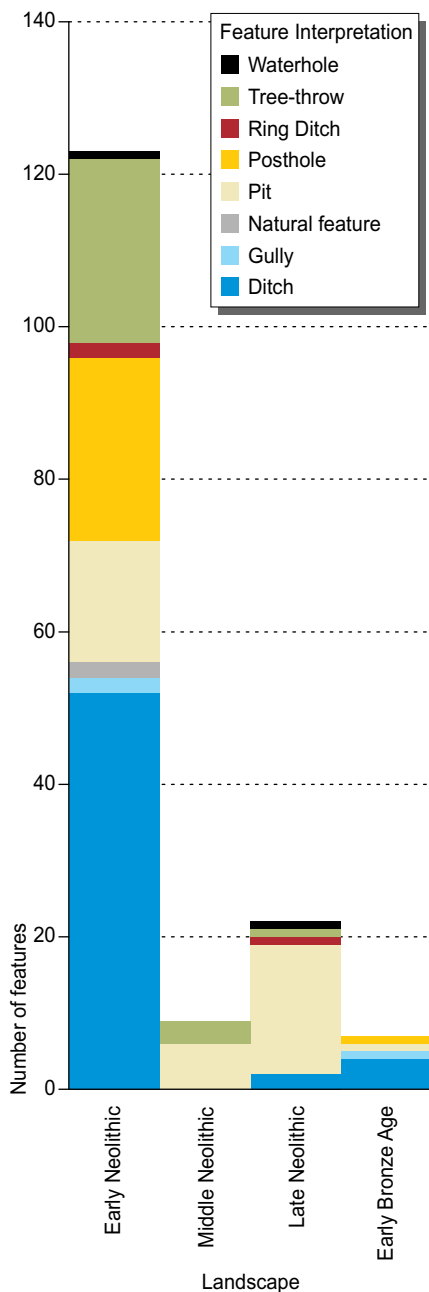
Using the ceramic chronology described previously, and noting the distribution of Neolithic ceramics by feature type at Terminal 5, the chart published in Volume 1 (Framework Archaeology 2006, fig. 2.2) can be updated (Fig. 2.10). This provides an indication of the type of activities that modified the landscape during the 4th and 3rd millennia BC. Of course, this chart is also a product of people choosing the sort of feature to deposit pottery in, and there is a large body of work (eg Evans *et al.* 1999, Thomas 1991, Cotton *et al.* 2006, Garwood 1999, 154) that has explored the variation in depositional signatures of different types of Neolithic pottery.

Figure 2.10 shows that prior to 3600 BC there appears to have been little human activity in terms of monument construction. The decline through disease of the elm population in Greater London (the 'elm decline') has recently been dated to 3750 BC (Rackham and Sidell 2000, 22). The effects of the elm decline on human behaviour are outside the scope of this volume, but it is surely no coincidence that following this event, during the currency of Plain

Bowl Ware pottery, we see a sudden and extraordinary flowering of monument construction in the form of large causewayed and small circular enclosures and cursus monuments. Recent work also suggests a sharp increase in the frequency of charred cereal grains in domestic contexts between 3800 and 3000 BC (Brown 2007). The chart reflects the impact of the C1 Stanwell and the other cursus monuments, but also the level of tree clearance at this time. Whether this was deliberate felling or removal of dead trees (perhaps groups of dead elms) to produce (or expand existing) glades and clearances in the forest is uncertain. These local clearances may have acted as foci for shifting settlement and agriculture, which left their mark in the form of pits excavated for domestic refuse and ritual deposits. However, it is clear that the construction of major linear monuments such as the cursus monuments would have required at least local clearance of the forest along their course. This is particularly true of the C1 Stanwell Cursus, which deviates only slightly from a straight course over at least 3.6 km.

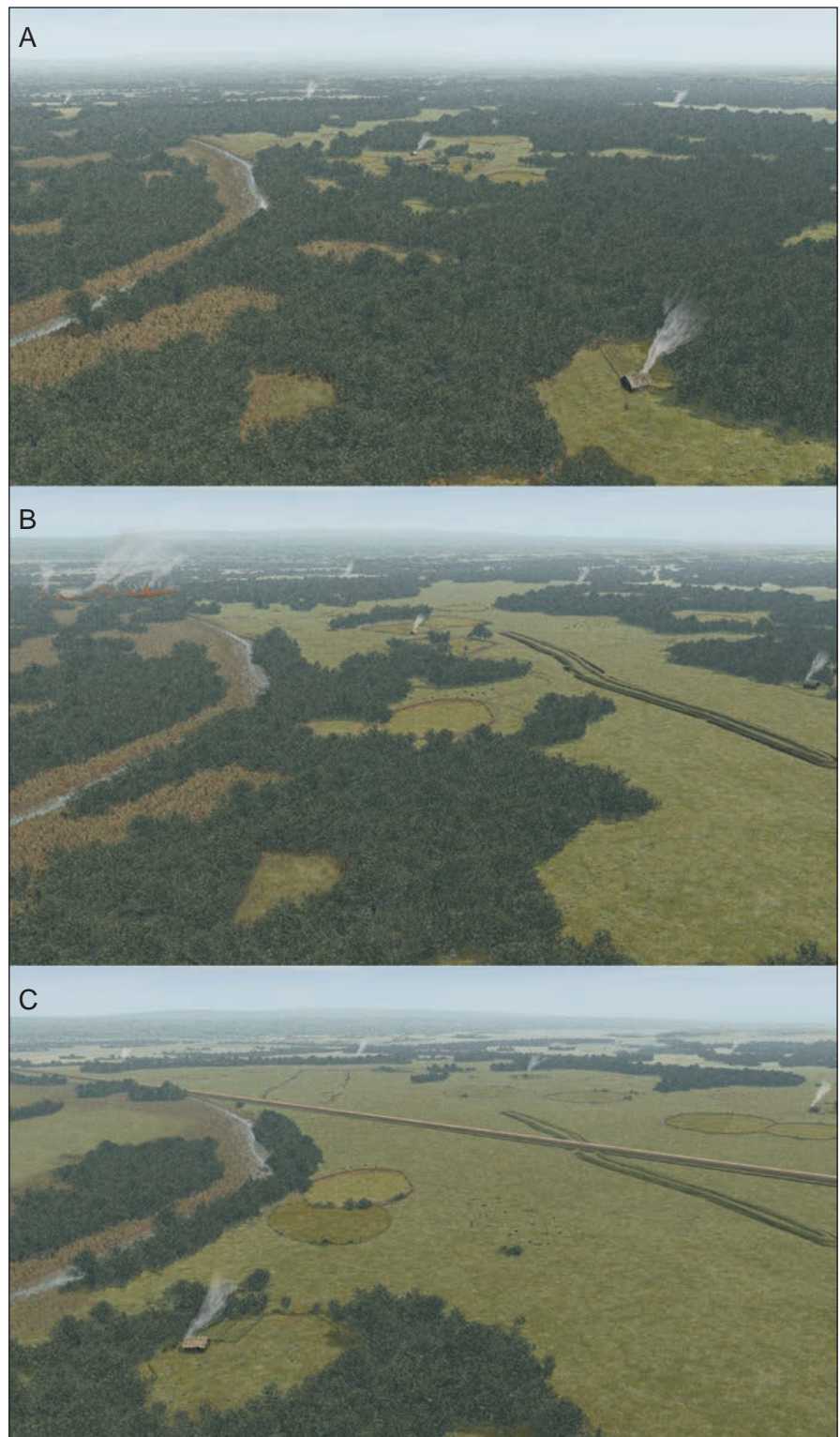
Figure 2.10 also demonstrates that whilst pits form the major type of receptacle for Peterborough Ware, ditches are almost as well represented. However, whilst the pits tend to be contemporary with Peterborough Ware, the ditches in the chart largely reflect the presence of Peterborough Ware in the upper fills of the Stanwell Cursus. Tree-throws appear to show a reduced level of clearance in the Middle Neolithic. The pattern of deposition of Late Neolithic Grooved Ware is markedly different, being found overwhelmingly in pits. Ditches are represented by the HE2 enclosure in Area 77, and a few sherds in the upper fills of the Stanwell Cursus. The lack of tree-throws is suggestive of a cleared landscape, or a deliberate choice not to deposit this pottery in these features.

Most of the Early Bronze Age pottery was recovered from a few pits, the remainder being from the upper fills of the Stanwell Cursus or the HE3 enclosure in Area 23. However, it is the small number of features containing



*Above*  
 Figure 2.11: Neolithic and Early Bronze Age features by type and construction date

*Right*  
 Plate 2.4: Artist's reconstruction of the changing Neolithic landscape at Terminal 5 (A to C)



low quantities of Early Bronze Age pottery that is perhaps the most striking observation.

The patterns in Figure 2.10 are even clearer when features are counted by type and date of construction (Fig. 2.11). This figure adds stratigraphic relationships to the presence of artefacts as dating evidence, and reduces the effects of residuality of pottery.

Figure 2.11 omits features where dating cannot be assigned to a specific period: thus features dated to the Late Neolithic or Early Bronze Age are not shown.

The preponderance of tree-throws and pits, as well as the presence of the post-hole complexes and cursus monuments prior to 3300 BC, is well illustrated in Figure 2.11. From then onwards

through the 3rd millennium BC, the scale of architectural construction is much smaller, with pits the most important form of feature. A chart showing the depositional context of Peterborough Ware from Greater London, also shows that pits are by far the most common receptacles of this type of pottery (Cotton with Johnson 2004, fig. 15.6). A comparison of the Middle Neolithic elements of Figures

2.10 and 2.11 confirms that the number of newly constructed features of this date is much lower than the occurrence of Peterborough Ware pottery in the higher silts of earlier features. In addition to pits, 3rd millennium BC features also include ditches and ring ditches, with the HE2 enclosure in Area 77 being the sole representative of its type. The Early Bronze Age appears to be completely different to the pattern of the 4th and 3rd millennia, with very few features being excavated. These consist mainly of the ring ditch (HE3 enclosure) in Area 23, and a few pits and gullies.

In summary we can conclude that:

- the landscape saw little human modification prior to 3600 BC (Plate 2.4, A)
- the landscape underwent clearance and became locally monumentalised from 3600 BC to 3300 BC (Plate 2.4, B and C)
- the community that adopted Peterborough Ware as part of a strategy of living in the monumental landscape in the late 4th millennium BC deposited pottery in pits and modified earlier monuments
- the trend towards deposition of pottery in pits came to dominate during the 3rd millennium with the use of Grooved Ware, but there is a suggestion that small circular monuments may have started to be constructed
- The Early Bronze Age is characterised by a lower level of activity and a decline in the preoccupation with deposition in pits, whilst possibly maintaining the focus on small circular monuments.

In the next section we will examine the archaeological features that predate the construction of the monumental complex at Terminal 5, the environmental evidence that we have obtained for this period, and the broader background of the environment in this part of the Thames Valley.

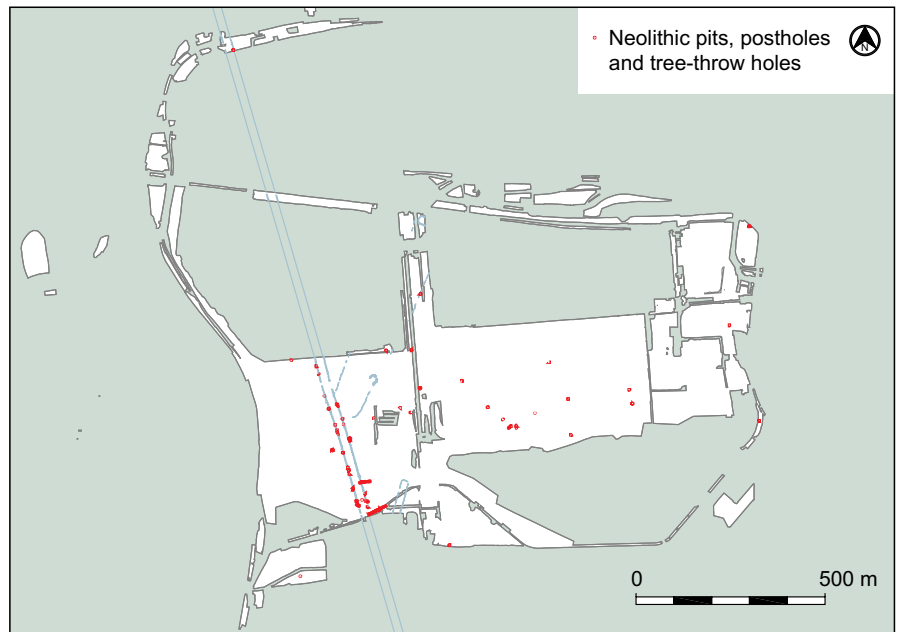


Figure 2.12: Distribution of Early Neolithic pits, postholes and tree-throws

### The landscape of the 4th millennium BC

In a previous section we showed that there is a general signature of human occupation across the Heathrow terrace and the Colne floodplain during the Mesolithic period. By analogy with pollen records from other sites, we have suggested that wider management of vegetation using fire was practiced. We have also shown that certain locations, such as the burnt flint-filled pits, attest to a particular form of activity.

We will now go on to explore (as best we can) human activity and the wider landscape from the end of the 5th and

early 4th millennia BC to 3300 BC (prior to and during the construction of the cursus monumental complex), using artefacts and stratigraphic relationships between features.

Our meagre environmental evidence (see below) and the scale of the cursus complex confirms that woodland clearance took place during this period. Figure 2.12 shows the scatter of pits, postholes and tree-throws that can be dated to this period, mostly on the basis of small fragments of Plain Bowl Ware pottery and/ or lithic material datable broadly to the 4th millennium BC, but also using stratigraphic relationships between features. The figure naturally demonstrates clustering

Feature Type	Feature No.	Pottery Fabric	No. Sherds	Weight (g)	Average weight
Tree-throw	120092	FL4	33	58	1.8
Tree-throw	156191	FL4	524	1325	2.5
Tree-throw	156191	QU13	17	119	7.0
Pit	158121	FL4	13	53	4.1
Tree-throw	511067	FL17	6	43	7.2
Tree-throw	525372	FL16	19	68	3.6
Pit	527200	FL4	7	96	13.7
Tree-throw	527288	FL4	31	259	8.4
Pit	548010	FL4	14	41	2.9
Tree-throw	558057	FL4	31	191	6.2
Tree-throw	558057	FL18	4	50	12.5
Pit	561277	FL4	76	565	7.4
Tree-throw	659082	FL15	10	75	7.5
Tree-throw	962200	FL4	13	118	9.1

Table 2.6: Pits and tree-throws with more than 40g of Early Neolithic Plain Bowl Ware pottery



Figure 2.13: Distribution of Early Neolithic pottery

of these features along the course of the cursus monuments, since these provide one of the few reliable stratigraphic tools with which to date earlier features. The distribution of Plain Bowl Ware pottery (Fig. 2.13) is more widespread, and shows that people occupied and utilised a much wider landscape than simply that near the monu-

ments, at least during the period 3600 to 3300 BC. Due to the likely overlap in dates in the currency of Plain Bowl and Peterborough Ware pottery, Figure 2.13 also displays the distribution of the latter. The Peterborough Ware appears to have a more peripheral distribution, with none being recovered during the Perry Oaks excavations. This may be a

Interpretation	Feature No.
Ditch	529516
	529520
Gully	527233
	521022
Natural feature	579142
	527200
	569066
	579136
	587028
	178054
Pit	962054
	962063
	962067
	962081
	962132
	524204
	529196
	529198
	529210
	575149
	582115
	598027
	605003
605005	
605007	
605009	
605011	
Posthole	128032
	962200
	512103
	513080
	525481
	527229
	555449
	555466
	559507
	579140
	588042
Tree-throw	128032
	962200
	512103
	513080
	525481
	527229
	555449
	555466
	559507
	579140
	588042

Table 2.7: Features stratigraphically earlier than the C1 Stanwell cursus

result of the destruction of more ephemeral pits (the main receptacle for Peterborough Ware) by the sludge works drying beds, but if so, then it appears not to have affected the tree-throws and pits containing Plain Bowl pottery to the same degree.

At certain locations in the landscape (for example, feature 156191), particularly high concentrations of Plain Bowl pottery and flintwork in tree-throws have led us to suggest that they were the locations of domestic settlements or



the deliberate deposition of midden material (Framework Archaeology 2006, 65–7, fig. 2.17). Table 2.6 shows the pits and tree-throws containing over 40 g of Plain Bowl pottery, and Figure 2.13 shows the distribution of these features. Unsurprisingly, the average weight of sherds from tree-throws (3.4 g) is half that of pits (6.9 g).

Since the artefactual evidence cannot determine with sufficient chronological precision activity that pre-dated or was contemporary with the construction of the cursus, we will now focus on features that are stratigraphically earlier than the monuments.

### *Pits and postholes pre-dating the cursus monuments*

A single posthole (539196) which was cut by the eastern ditch of the C2 Cursus demonstrates some form of activity at this location prior to construction of the monument (see Fig. 2.41, section 6, below). Likewise, activi-

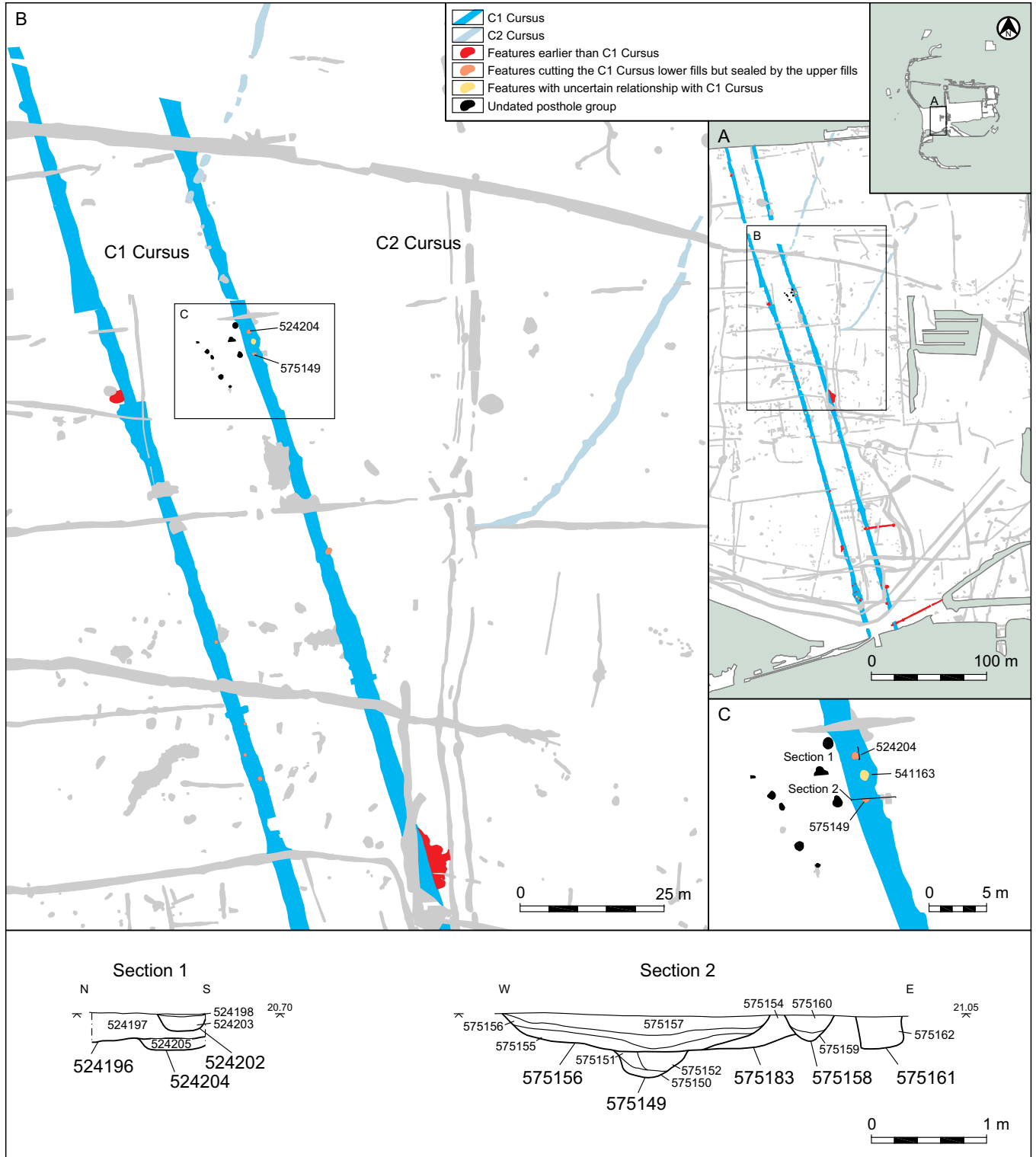


Figure 2.14: Posthole complex near the junction of the C1 and C2 cursus monuments

ty which predates the construction of the C3 monument is demonstrated by pit/posthole 580401, which was cut by the eastern cursus ditch (see Fig. 2.24, section 13, below). However, it is the C1 Stanwell Cursus that provides the greatest evidence of pre-monumental activity (Table 2.7 and Fig. 2.12).

The Terminal 5 excavations revealed a number of pits and postholes that were stratigraphically earlier than the C1 Cursus (Fig. 2.12). The question is do these early features represent activity specific to particular locations, or are they simply a sample of more widespread activity which has been identified through the destructive cutting of the cursus ditches as they cut across the landscape? If we look along the length of the cursus as excavated, it is only in the large central area (POK96, WPR98 and PSH02 Area 49) that features pre-dating the cursus were detected. None were recorded in the northern and southern extremities of the excavated monument, but of course, less of the monument was exposed in these areas. A total of 663 square metres of the C1 Cursus was excavated by hand, and this revealed eight tree-throws and 13 pits or postholes which had been cut by the cursus ditches. It is likely that such a long transect as the cursus would encounter by chance the remnants of previous activity at some point along its course, although there does appear to be actual concentrations of postholes along the C1 Cursus (Fig. 2.14).

### ***Posthole complex near the junction of the C1 and C2 cursus monuments***

A scatter of postholes lies near the intersection of the C1 and C2 monuments, cut by both the eastern and western C1 ditches, and has been partially described in Volume 1 (Framework Archaeology 2006, 46–7; fig. 2.8). It was suggested that the postholes may have served as ‘totem poles’, or part of a timber screen or monument, or have been associated with the construction of the cursus (Framework Archaeology 2006, 46–7; fig. 2.8). In addition, other postholes were excavated which cut the lower fills but were sealed by the upper

fills of the cursus ditches, and it was suggested that these served to mark the significant places which were subsequently sealed by the C1 Cursus, but which remained as important ceremonial locations (Framework Archaeology 2006, 59; fig. 2.13).

The Terminal 5 excavations have added two more postholes (524204/524202, and 575149) to this scatter, though located further north along the eastern cursus ditch; the relationship of a third (541163) was uncertain (Fig. 2.14). All three are 0.6 to 0.7 m wide and, allowing for truncation since 1943, would have been approximately 1.1 to 1.3 metres deep. They could thus have held substantial posts.

None of these postholes has been independently dated, so the chronology of these features is based on that stratigraphic relationships with the C1 Cursus. The length of time between the erection of the putative posts and the construction of the cursus is therefore uncertain.

Just to the west of the eastern cursus ditch lie three more postholes, with a further five some four metres to the south-east (Fig. 2.14). None of these postholes has a stratigraphic relationship with the C1 Cursus, and none contained artefacts, so they all remain undated. Indeed, another posthole (559285; not on plan) contained modern material, so caution must be exercised when considering these features. However, it does appear that at least the three postholes cut by the C1 Cursus ditch do pre-date the monument, and what is more, they lie on the sightline from inside the HE1 enclosure (see Fig. 2.19 and Plate 2.9 below) towards the sun as it would have set behind the C1 Cursus at the midwinter solstice (Framework Archaeology 2006, 74–81). This raises the possibility that (contrary to the sequence expressed in Volume 1) the HE1 enclosure and (at least three) postholes were contemporary, and predate the C1 Cursus.

A number of cursus monuments have associated post or stakeholes, and Loveday (2006, 38–40) groups them thus:

- Definition purely by contiguous or near contiguous posts as at Bannockburn, Douglasmuir and other Scottish sites
- Spaced settings of large posts as at Holywood (internal) and probably Scorton (external)
- Slight, partial and perhaps later stake / post lines as at Maxey
- Settings in the base of the ditch as with the C1 Stanwell Cursus and Scorton. In addition Loveday suggests that the solution hollows found in the base of the North Stoke bank barrow could be interpreted as postholes.

It does appear as though the long mound / bank barrow form of cursus monument such as Stanwell, Scorton and possibly North Stoke provide the clearest evidence of these monuments being preceded by timber posthole structures and alignments (Loveday 2006, 39). Indeed, it may be a function of these long mound monuments to seal and incorporate earlier places of special significance within their plan.

We will now turn to the second concentration of features at Terminal 5 that predate the C1 Cursus.

### ***Pre-cursus settlement complex, Area 49***

The second concentration of features lies at the southern part of the PSH02 excavations in Areas 49 (Burrows Hill) and 89b (Fig. 2.15). These revealed a complex of gullies, ditches, postholes, pits and tree-throws that are very difficult to interpret either individually or as a complex. They are important in that most of these features are stratigraphically earlier than the ditches of the C1 Cursus (Plate 2.5). Furthermore we are fortunate to have a single pollen diagram from a pit (527200) which pre-dates the eastern ditch of the C1 Stanwell Cursus, and provides an insight into what the landscape looked like immediately prior to the construction of the C1 monument.

The stratigraphically earliest traces of activity are represented by two post-

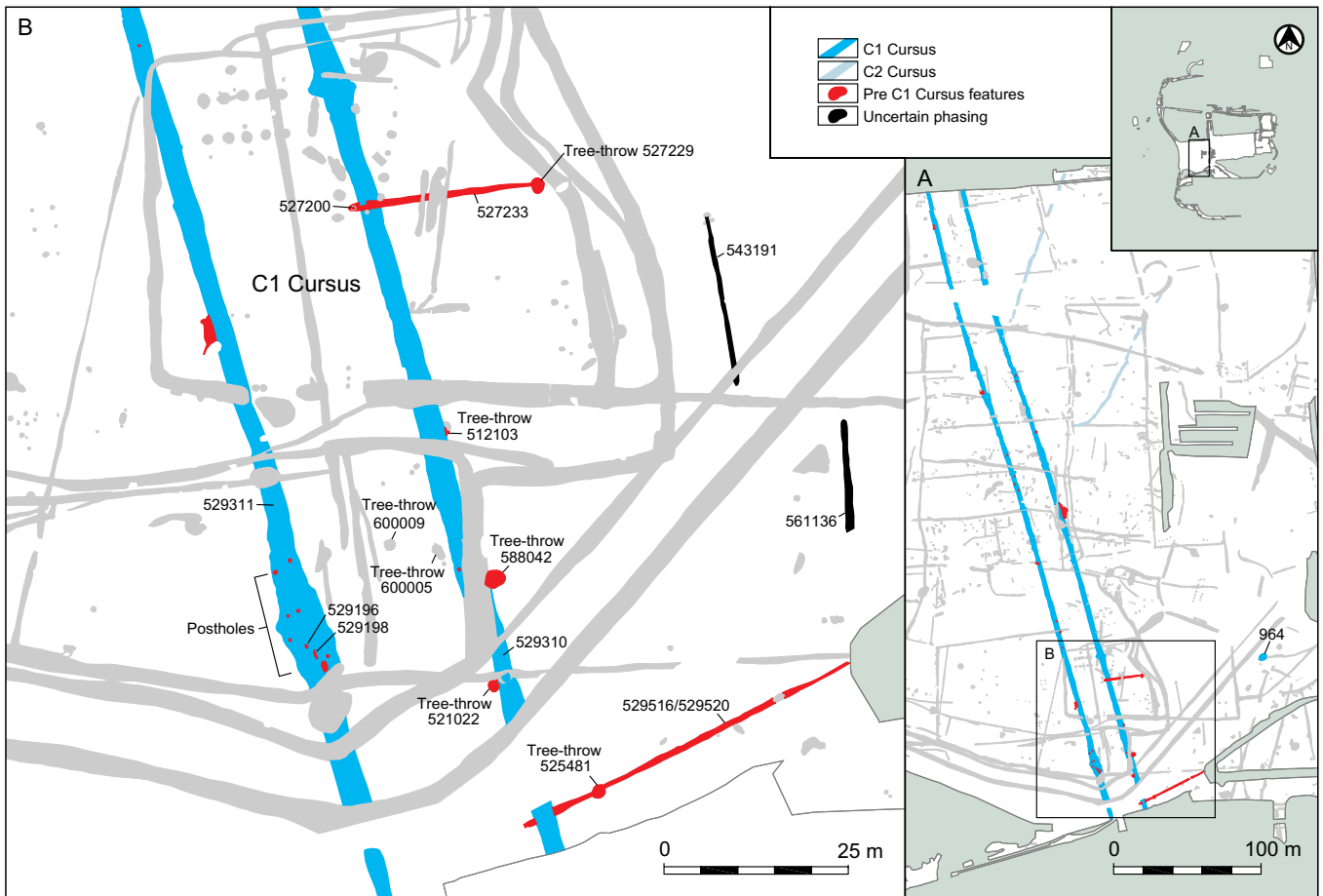


Figure 2.15: Pre-cursus settlement complex, Area 49

holes (529196 and 529198) and tree-throws 512103, 521022 and 588042 which were cut by the two parallel ditches (529310 and 529311) of the C1 Cursus. Tree-throw 600009 contained fragments of Neolithic Plain Bowl Ware, and 600005 a flint blade, but as both features were located in the centre of the C1 Cursus, it is impossible to determine if the artefacts are contemporary with the tree-throws. If they are, then combined with those stratigraphically earlier than the cursus,

they are evidence for clearance prior to construction of the subsequent monuments. Other tree-throws and postholes are scattered across the area, but are undated, do not make a meaningful pattern and have no stratigraphic relationships with Neolithic features. It is possible that the clearance originated as a localised glade, and the postholes could represent remnants of a settlement within the clearing. The concentration of Neolithic finds from features around this area is not perceptibly

higher than elsewhere, which tends to militate against this interpretation. However, there is a pit (527200) 1.10 m deep, which was subsequently cut by gully 527233 and then the eastern C1 Cursus ditch (Plate 2.6). The lower fills of pit 527200 contained seven sherds of Plain Bowl pottery and a handful of flint flakes and nodules. The lower fills (527206 and 527291) also produced a pollen diagram (from the lowest part of monolith 17094; Fig. 2.16), which provided the following sequence:



Plate 2.5: Postholes and pit pre-dating C1 ditches towards the west

A few odd grains of obligate aquatics were found (duckweed (*Lemna*), and pondweed (*Potamogeton*)), showing that there was standing water in the pit during the time of fill. An interesting find is a spore of hornwort (*Anthoceros*), a liverwort-like taxon found growing on damp soils probably around the edge of the pit. There is no evidence of faecal material within the sediments suggesting that this pit may have been used for the disposal of domestic debris.

Eight sub-samples were analysed from this sample, 5 from the lowest contexts (527206), and 3 from the overlying context (527191)...Pollen concentrations are low, suggesting quite rapid accumulation of the sediments particularly those of the lowest context (527206). This context also contained a number of fungal spores including those of *Glomus*, a taxon found in soils, and may thus be reworked. The presence of fungal spores, the poor preservation of grains which may indicate they have been subjected to aerobic conditions, and the rapid accumulation rate, suggest that this fill was perhaps 'dumped' into the pit.

The diagram (Fig. 2.16) shows that at the time the contexts were being deposited or dumped, the area around the sample site was very open, with herbs dominating the pollen percentages. Some woodland was still extant in the area on the drier ground. This woodland contained very little elm (*Ulmus*), suggesting that the sample is post 'Elm decline' (dated to c 3700 BC). However, the woodland was made up of deciduous tree and shrub taxa, oak (*Quercus*), hazel (*Corylus*) and particularly lime (*Tilia*). Lime trees, even though insect pollinated, produce quite large amounts of pollen, which is heavy and falls close to the trees that produced it instead of being whisked up into the air. Lime is thus under-represented in the 'pollen rain'. Therefore, although lime percentages appear low in this fill, the tree probably formed a large component of the woodland on drier ground nearby. The so-called 'Tilia decline', associated with anthropogenic forest clearance, occurred at different times at different sites, but has been shown to occur about 3000–3700 years BP in this area (West Heath Spa, Hampstead Heath (Greig, 1991), Tilbury (Devoy, 1979). This suggests that the fills were laid down between c 5000 and 3000 years BP and



Plate 2.6: Photograph showing relationship between east cursus ditch, gully 527233 and pit 527200 under excavation, looking east

that they therefore confirm a Neolithic age for these contexts. Alder and willow (*Salix*) were probably growing on wetter ground. Although a few grains of pine (*Pinus*) were found, it is unlikely that pine, other than the odd tree, was growing in the vicinity as pines produce copious amounts of pollen and would have much larger percentages if locally present. It was probably growing on the sandier soils north of the area. There is some slight evidence for an increase in trees and shrubs towards the top of the diagram, with other shrub taxa characteristic of somewhat open woodland, including holly (*Ilex*), buckthorn (*Rhamnus cathartica*) and guelder rose (*Viburnum opulus*), appearing. This could imply increased grazing within the woodland, opening the woodland further, so that taxa characteristic of woodland glades and edges, such as holly, buckthorn and guelder rose, either increased or flowered more profusely. The decrease in fern spores and increase in bracken (*Pteridium aquilinum*) seen at the same time could support this hypothesis. A few grains of dwarf ericaceous shrubs (heather and heaths (*Calluna* and undifferentiated *Ericales*)) also appear towards the top of the diagram but were probably not growing close to the site but on sandier soils to the north.

The herbaceous taxa are dominated by grasses and many taxa associated with arable fields and pastures. Quite high percentages of cereal pollen types including the oats and/or wheat group,

*Avena/Triticum*) suggest that cereals were being grown very close to the site as these grains are large and do not travel far, although some grains may have been incorporated into the pit as waste cereal processing material (Robinson & Hubbard, 1977). Taxa characteristic of arable fields include many composites, brassicas (*Brassicaceae*), chickweeds (*Caryophyllaceae* undiff. (undifferentiated), *Cerastium*-type), black bindweed (*Fallopia convolvulus*), and knotgrass (*Polygonum aviculare*-type). Many of these taxa are also characteristic of ruderal communities, disturbed ground and footpaths. Other taxa may be associated with pastures and meadows such as grasses, ribwort plantain (*Plantago lanceolata*), greater and hoary plantains (*Plantago major/P.media*), clover (*Trifolium*-type), buttercups (*Ranunculus*-type), sedges (*Cyperaceae*), cow parsley family (*Apiaceae*), composites (daisy-type, dandelion-type, thistles (*Cirsium/Carduus*)), yellow rattle-type (*Rhinanthus*-type), bedstraws (*Rubiaceae*), sorrels (*Rumex acetosa*-type) and selfheal-type (*Prunella*-type). Monolete fern spores are quite abundant, particularly in the lower part of the diagram: this may be due in part to differential preservation as fern spores are very resistant and are recognisable even when pollen is badly preserved, but nevertheless there must have been quite a number of ferns growing close by, perhaps around the pit and also in the woodland which may have been quite open and subjected to grazing.

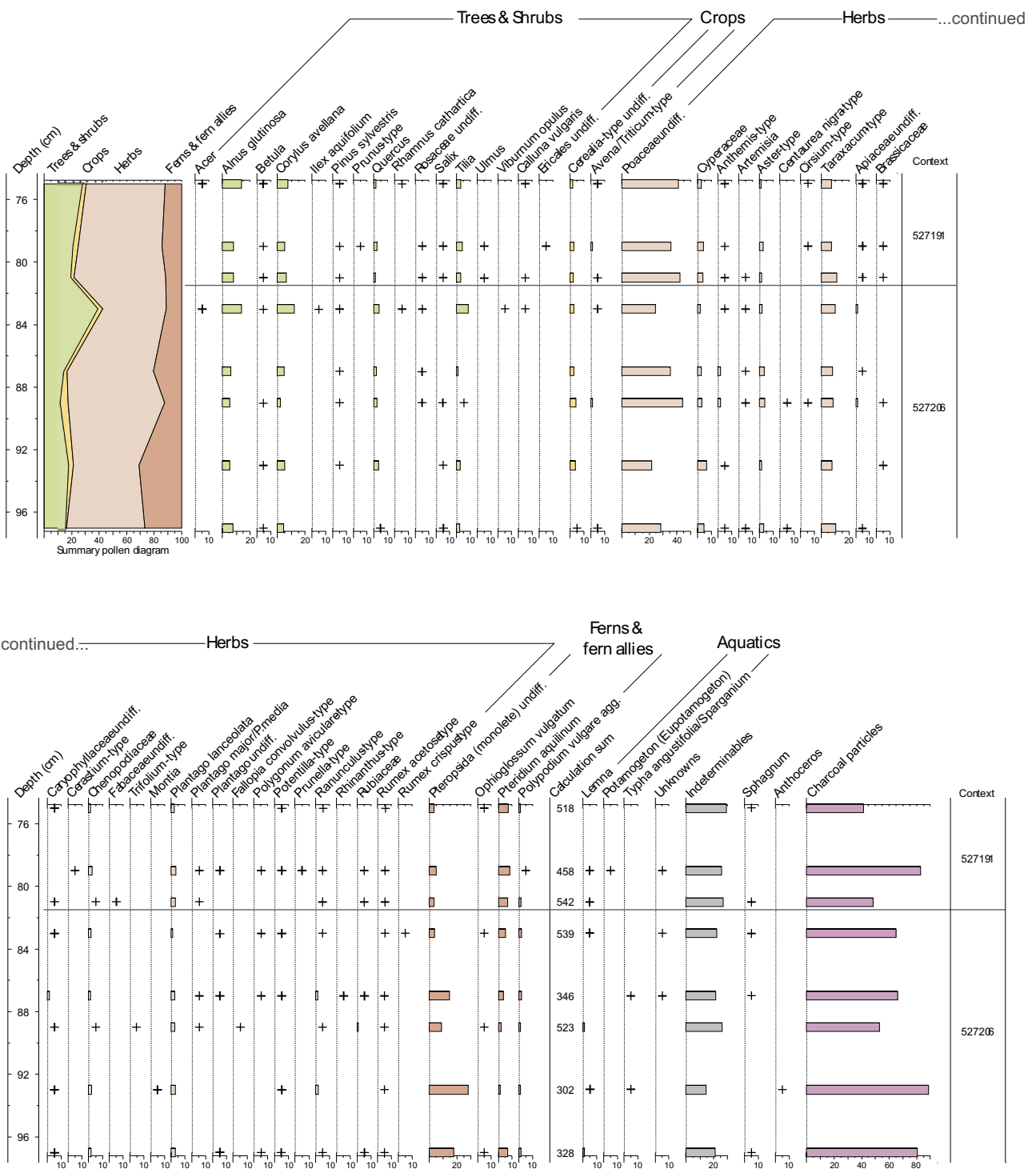


Figure 2.16: Pollen percentage diagram: Sample 17094, the fill of Early/Middle Neolithic Pit 527200

All subsamples contained many micro-charcoal particles, and the material sieved off during pollen preparation also contained larger pieces of charcoal which are more conclusive evidence of local fires. The sievings contained several rush (*Juncus*) seeds, particularly from levels 0.79 and 0.81 m (context (527191)). Pollen of rushes are very rarely preserved, and these seeds show that rushes were growing

in and around the site at this time, suggesting that the pit was perhaps no longer in use and that context (527191) represents a natural infilling of the pit. The higher pollen concentrations in this context, suggesting a lower sedimentation rate, are perhaps further proof of this.

(Peglar et al., CD Section 16)

The pollen diagram (Fig. 2.16) is important in that it suggests that the pit (and thus the Stanwell Cursus) was dug after the elm decline (dated to 3750 BC in London, Rackham and Sidell 2000, 22). It is also important in that it suggests a landscape that although having woodland nearby, was opened up to a large extent with areas given over to grassland, pasture and

arable fields. This is similar to the interpretation of the Early Neolithic landscape in Southwark, central London. Here, the evidence from Joan Street suggests cereal cultivation in the pollen record following secondary clearance after 3500 BC (Sidell *et al.* 2002, 47). At Bryan Road, cereal cultivation follows directly after the elm decline in the early 4th millennium BC (*ibid.*). Removal of the woodland cover would have transformed north Southwark and Lambeth into a relatively open landscape, probably interspersed with intermittent woodland on higher ground to the south, with some arable fields and pastures (probably in the river margins in summer). Sidell also makes the connection between an open landscape, monuments and sightlines between monuments (*ibid.*). However, Branch and Green (2004, 13) caution that there is very little evidence for the elm decline in the Middle Thames Valley upstream of central London. For example Meadlake Place and Runnymede in Egham, Surrey provide no evidence of the elm decline, with interference in the woodland succession being minimal (*ibid.*). Whilst this may be correct for the first third of the 4th millennium BC, the circumstantial evidence of monument construction and frequency of tree-throws, together with the direct pollen evidence from pit 527200, shows that certainly from 3700 BC human impact was considerable.

Unfortunately at Terminal 5, soil micromorphology was less successful in providing evidence of the Early Neolithic soils:

*There is little soil data on the pre-Neolithic soils other than that these were gleyic brown earths, with iron-depleted clay loam upper subsoils and clay subsoils. As no fragments of old woodland Moder and/or Mor humus horizons (Goldberg and Macphail, 2006, table 3.2) were encountered it is impossible to attempt to identify the presence of completely undisturbed woodland soils prior to Neolithic impact and cursus construction.*

(McPhail, CD Section 19)

Following the excavation of pit 527200, the next event was the construction of two gullies, 527233 and 529516 / 529520 (Fig. 2.15). The northern gully, 527233, was a shallow feature approximately 26 m long and 0.80 m wide. It was orientated ENE, and it cut a pit (527200) and a tree-throw (527229). The gully was in turn cut by the eastern C1 Cursus ditch, 1.6 m to the east of the eastern gully terminus. The gully contained a scrap of unidentifiable prehistoric pottery and a handful of flint flakes of broadly Neolithic date.

Located 86 m to the south-east, a second gully, consisting of features 529520 and 529516, was orientated ENE and was approximately 50 m long (the ENE terminus was destroyed by later features). The gully was cut by the eastern ditch of the C1 Cursus. Only two flint flakes were recovered from 529520. Two other gullies (543191 and 561136) near those described could also be roughly contemporary, but the absence of stratigraphic relationships makes it difficult to determine if the finds they contain can be used reliably to date them.

The precision with which the Stanwell C1 Cursus ditch cut the ends of gullies 527233 and 529516, 1.6 metres from their termini, strongly suggests that both gullies terminated at or against a pre-existing feature or structure. If so, this has left no direct trace. The alternative explanation is that the stratigraphic relationships of the gullies and the cursus ditch were incorrectly recorded, and the gullies post-date the cursus ditch and terminate against the bank. However, these features were carefully excavated and recorded, and we respect the excavation records in this interpretation.

Lying 106 m to the east of pit 527200, near the north-western corner of the C3 Cursus, was a series of inter-cutting pits (Entity 964) contained Plain Bowl pottery, flints and quern stone fragments. This pit complex will be discussed more fully later in this chapter but we interpret the lower fills of the pits as containing domestic refuse from the settlement features cut by the C1 Cursus.

## *Interpretation of the landscape*

Interpreting the sequence of postholes, pits, ditches and gullies described above is extremely difficult, and many alternatives are possible. The following is one alternative.

Sometime around 3700 BC, the first small localised arable and pastoral clearings created by people in the woodland cover provided a route for the massive expansion of elm disease, carried by the beetle *Scolytus scolytus* (Sidell *et al.* 2002, 46–7). This opened up the forest canopy into larger and more frequent glades and clearings (see artist's reconstruction in Plate 2.7). Within these expanding clearings, shifting cultivation and animal husbandry were practiced by family groups. These family groups left traces of their occupation in the form of the postholes described above. Along with these, there was a conscious attempt to inscribe the presence and ancestral past of the family on the land that they had cleared and occupied. As families grew and coalesced into larger groupings, and more land was exploited, this inscription and the negotiations over access to land and resources became more important. We believe that it was these concerns that caused people to construct an early monument in the shape of the two complexes of postholes near to what would become the junction of the C1 and C2 Cursus.

Further south, in Area 49, the excavation of the deep pit 527200, served functional purposes but was also as an inscription on and in the landscape: a 'vertical land cut' (Russell, 2004, 174). What happened next and when is unclear: it is possible that the two gullies (527233 and 529520 / 529516) formed part of the occupation activity in the clearing, perhaps part of an enclosure around the settlement or a stock pen. However, as discussed above, their apparent alignment with a monument (the C1 Cursus) that post-dated them suggests that some sort of structure already existed for them to be orientated on. The ditch fills of the C1 Cursus between the two gullies (527233 and 529520 / 529516) in this area are unusual and suggests a more

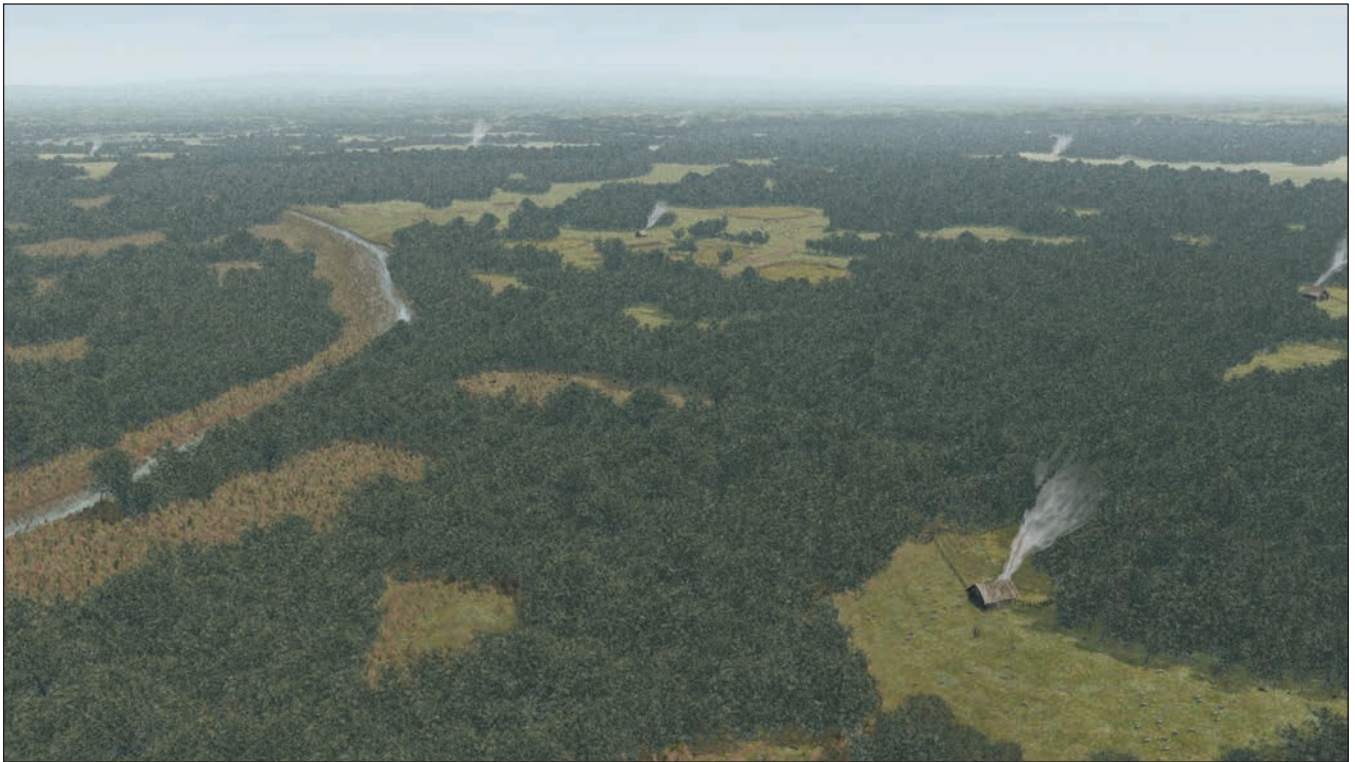


Plate 2.7: Artist's reconstruction of Neolithic pre-monument landscape

complex history of remodelling the monument than elsewhere along its course. This sequence will be described later, but it adds weight to the conclusion that this particular place in the landscape, both before and after the construction of the C1 Cursus, was of considerable importance.

Having described the timber post complex and the settlement complex, we will next turn to the construction of the first earthen monuments.

### The monument complex

In the previous section we showed that immediately prior to the period of cursus construction (sometime between 3600 BC to 3300 BC) the landscape had already been opened up, with areas given over to grassland, pasture and arable fields. Within this landscape, ancient locations of human activity dating back to the Late Mesolithic (such as the burnt pit complex) were supplemented by possible settlement areas (the pit and gully complex in Area 49) and potential timber markers or monuments (the posthole complex near the junction of the C1 and C2 Cursus monuments). Within the wider landscape (Fig. 2.17), it is likely that the interrupted ditch enclosure at Yeoveney Lodge Staines (Robertson-

Mckay 1987) had already been built, together with others along the Thames such as Dorney (Carstairs 1986, 164), Eton Wick (Ford 1986) and possibly Runnymede (Needham and Trott 1987, 482 and fig. 2). If the Mayfield Farm double ditched crop mark is also a causewayed enclosure (Lewis 2000, 73), then it too may have been in existence (and even gone out of use) by the time the cursus complex was constructed at Terminal 5.

The Terminal 5 monument complex was thus constructed in a world where people had already built large circular monumental enclosures, and as we have seen, had already had an impact on the Heathrow area. We will now turn to the monument complex (Fig. 2.18) itself.

Table 2.8: Terminal 5 monuments and possible sequence of construction

Construction Date	Monument Name	Monument Type	Construction sequence	
			Favourite	Alternative
2400 - 1500 BC ?	HE3 enclosure	Circular ring ditch	7	6
3000 - 2000 BC ?	HE2 enclosure	Irregular "horseshoe" shaped enclosure	6	5
3600 - 3300 BC ?	C4	Long Enclosure (cursus)	5	4
3600 - 3300 BC ?	C2	Minor Cursus (?)	4	2
3600 - 3300 BC ?	C1 Stanwell	Mega Cursus	3	3
3600 - 3300 BC ?	C3	Cursiform Long Enclosure	2	2
3600 - 3300 BC ?	HE1 enclosure	Irregular "horseshoe" shaped enclosure	1	2
3600 - 3300 BC ?	Settlement on Area 49	Pits, postholes and gullies predating C1 Cursus	1	1
Pre 3600 BC ?	Posthole complex	Postholes predating C1 Cursus	1	1

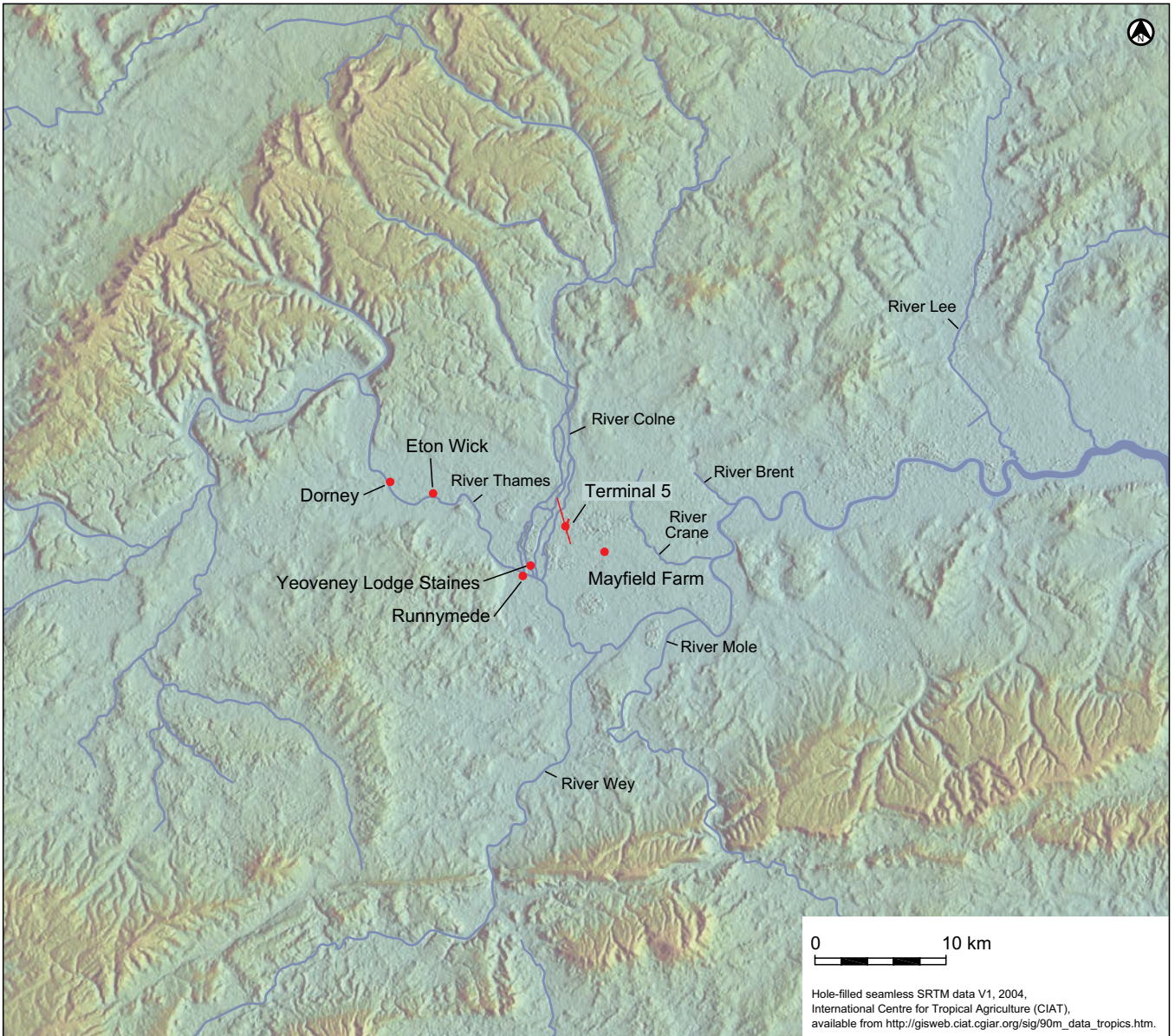


Figure 2.17: Causewayed enclosures near Heathrow

### Sequence of construction

Table 2.8 lists the monuments excavated at Terminal 5, their estimated date and relative sequence of construction. We have already described the settlement and the post-hole complex, and of course the scatter of Late Mesolithic burnt flint filled pits. All these pre-date the C1 Stanwell Cursus, but the relative sequence of construction of the HE1 Enclosure and the cursus monuments themselves remain a matter for conjecture. Table 2.8 shows the sequence presented in this volume, and an alternative sequence, but several other alternatives are also possible.

The monuments at Terminal 5 fall into two clear categories:

- the small circular enclosures / ring-ditches of different forms which were constructed over a much longer period from the middle of the 4th millennium to the early 2nd millennium BC
- the cursus complex, consisting of long linear enclosures with banks or central mounds, constructed over a relatively short period sometime between 3600 and 3300 BC

The two categories of monuments clearly represent different scales of human endeavour and involvement.

The cursus monuments were conceived by the local community against the background of a national phenomenon of cursus construction. They were executed within a clear social framework, resulting in a large and coherent monumental complex. The small ring ditches were also constructed against a national background of small circular monuments, however their form is far more varied, as is their scattered distribution. In particular, they would have required far less labour to construct, and would not have required the participation of large sections of the entire community. Furthermore, the architecture and function of these monuments clearly varied over nearly two millennia.



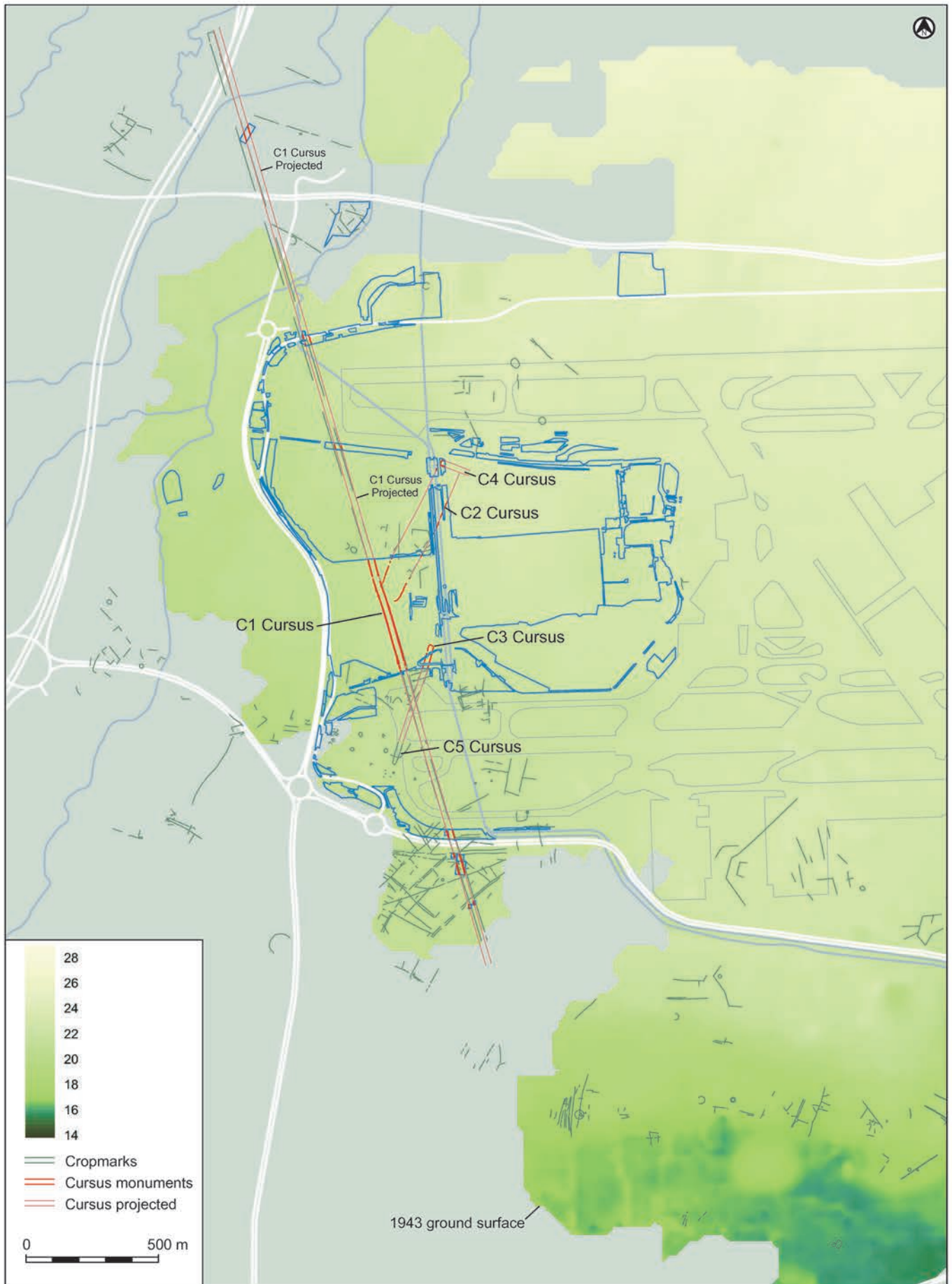


Figure 2.18: Terminal 5 cursus complex



Figure 2.19: HE1 Enclosure: Plan and sections

Two of the three small circular enclosures (HE2 and HE3) have been tenuously dated to the 3rd millennium BC. The HE1 Enclosure, has, on balance, been re-assigned (compare Volume 1, 72–80) to the latter half of the 4th millennium BC. Unfortunately, due to a lack of stratigraphic relationships between the HE1 and the C2 Cursus, it has been impossible to determine if the HE1 Enclosure predated, was contemporary with, or postdated the construction of the cursus complex. For the purposes of this narrative, we will assume that the construction of the HE1 Enclosure predated the construction of the cursus complex, but that it also continued in use once these monuments had been built. Accordingly, we will consider the HE1 Enclosure first, before examining the cursus complex. We will then go on to consider the landscape and monuments of the 3rd millennium BC.

### The HE1 Enclosure

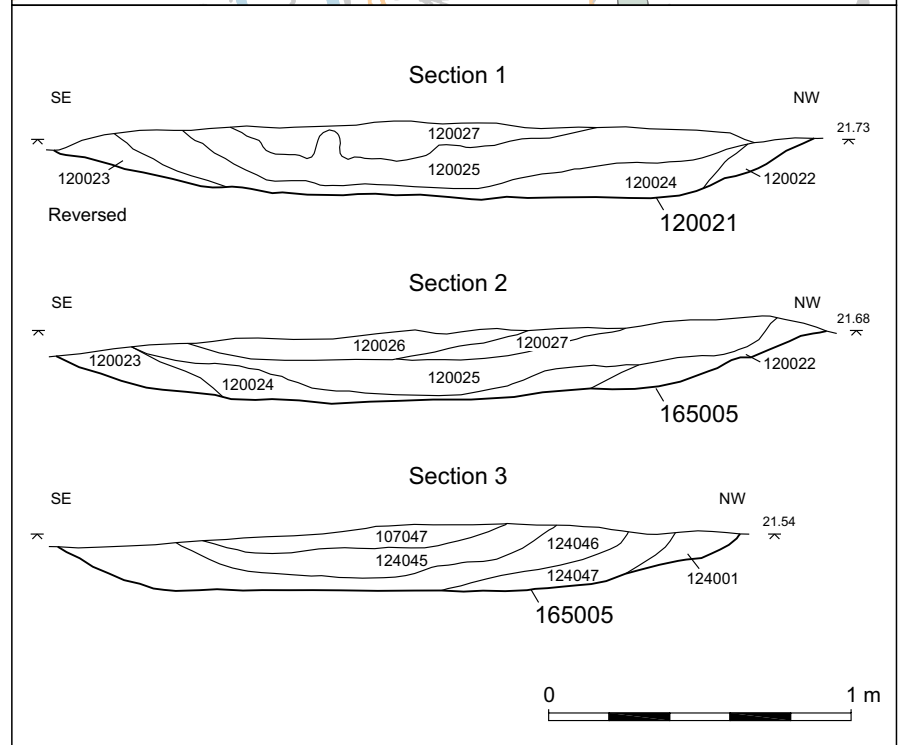
In Volume 1, it was considered on the basis of the lithic assemblage that the HE1 Enclosure dated to the 3rd millennium BC. We have subsequently changed our opinion based on a reappraisal of the lithics and the possibility that the HE1 Enclosure was aligned on

the posthole complex, and thus predated the C1 Stanwell Cursus. This is very tenuous evidence, and the HE1 Enclosure could equally post-date the C1 Cursus, but for the purposes of this report we will assume the former.

The horseshoe shaped enclosure HE1 (Fig. 2.19; Plate 2.8) was fully described in Volume 1 (Framework Archaeology

2006, 72–80). Since the Terminal 5 excavations added no further information on this monument, the detail will not be repeated here.

In summary, the HE1 Enclosure had been heavily truncated and could not be closely dated (see above). It was suggested that the poor condition of the flintwork from the lower fills



indicated that the location had seen a long history of occupation prior to the construction of the monument. The surviving upper fills contained lithics, burnt flint, charcoal and fragments of animal bone (but no human bone) and it was suggested that this material was the result of feasting, associated with activities inside the enclosure (Fig. 2.20).

The enclosure was reconstructed as having internal banks, and it was suggested that the monument could have accommodated 10 to 12 people standing around the inside of the bank. It was noted that the south-western and north-eastern entrances were roughly aligned on the orientation of the setting sun at mid winter, and the rising sun at mid summer respectively (Fig. 2.21; see artist's reconstruction in Plate 2.9). We concluded that the primary use of the monument was to facilitate the meetings of groups of people at particular times of the year, such as the equinoxes. These people negotiated, through various media, access to land, water and other resources. The negotiations may have taken place via ceremonial occasions such as marriages, births and rites of passage and may have been facilitated through rituals which involved slaughter and / or consumption of animals. Although fragmentary, the finds signature from the remnants of the ditches could be interpreted in this way.



Plate 2.8: Section through ditch of HE1 enclosure

Thus the HE1 Enclosure was built for a small group of people to meet, perform ceremonies and observe solar events in relative seclusion. However, *Leivers* (CD Section 4) has undertaken...

*...a comparison of the assemblages from two ostensibly very similar earthworks: the inner ditch at Manor Farm, Horton (Ford and Pine 2003) and the Heathrow T5 HE1 Enclosure. Ford considers the Manor Farm enclosure to belong to the class of non-megalithic funerary monuments. The suitability of this assignation is open to question, but there is certainly no reason to suppose that the HE1 Enclosure was associated with any funerary activity. That being said, the depositional signatures at the two sites have a number of similarities... The quantities and range of types present (and absent) are very similar (as are the relative proportions), and both assemblages are associated with a range of other materials (stone, bone, fired clay).*

*The most notable difference between the two sites is that while at Horton most of the lithics were recovered from the lower ditch silts, in association with a rich ceramic assemblage, at Heathrow the pieces were spread fairly evenly throughout the fill sequence, with those in the lower fills having more evidence of residuality (in the form of post-depositional damage) than those from the surviving upper fills, which were fresh and apparently associated with the use of the structure. Ceramics were most notable by their absence, which fact is perhaps the greatest difficulty in accepting the tentative suggestions that the HE1 material derives from food processing and consumption (perhaps feasting); the Horton material is interpreted as 'domestic material being deposited in... apparent clusters and concentrations... suggest[ing] that this is at least partly deliberate' (Ford and Pine 2003, 32).*

(*Leivers*, CD Section 4)

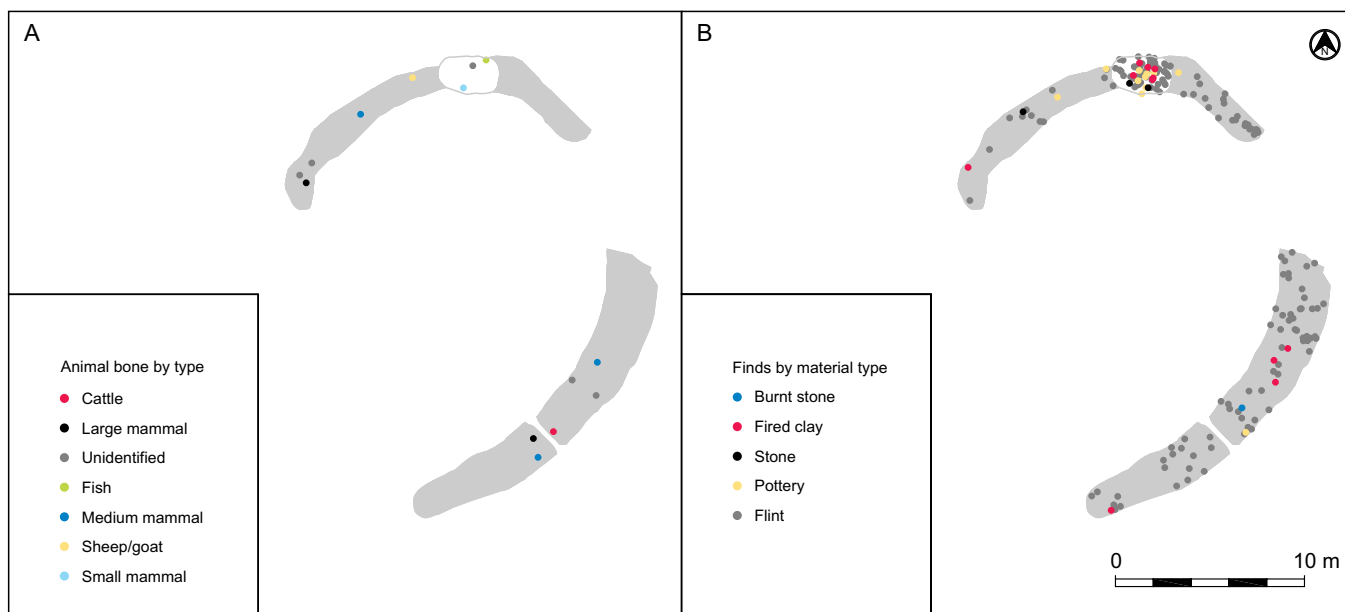


Figure 2.20: Distribution of artefacts and ecofacts within the HE1 Enclosure



Plate 2.9: Artist's reconstruction of solstice ceremony within the HE1 enclosure

Nevertheless we maintain our original interpretation of the HE1 Enclosure, since it is difficult to distinguish between domestic refuse that has been 'placed' in a pit or ditch as part of a ceremony, and material which has accumulated in a context as a result of activities such as feasting which are a by product of ceremony. The occasional inclusion of human remains within deposits that would normally be described as 'domestic' shows that 'ritual' permeated all aspects of life in the Neolithic, and was not exclusively confined to certain sites or monuments (see Allen *et al.* 2004, 97). Conversely, we may also infer that what we would think of as 'domestic' activities also intermingled with 'ritual' at sites we do think of as ceremonial monuments. What we would concede is that dating the monument on the very meagre and largely undiagnostic lithic assemblage to the 3rd millennium BC was probably optimistic, and that based on similarities with the inner enclosure at Horton, it is at least as likely that the HE1 Enclosure dates to the latter half of the 4th millennium BC.

As outlined above, the major orientation (judging by the size of entrance) of the HE1 Enclosure was towards the setting sun at mid winter, with a minor orientation on the rising sun at mid summer. The orientation of the inner Horton enclosure is the opposite of this, with the large open end of the horseshoe aligned directly towards the mid summer sunrise. There are hints that the closed south-western end may originally have been open (Ford and Pine 2003, 20). If so, then the narrower opening would have been orientated towards the sunset at midwinter. In Volume 1 we have suggested that regardless of whether the monument was built before the construction of the C1 and C2 Cursus, it remained in use afterwards (Framework Archaeology 2006, 77). The excavation of the posthole complex, which would have held substantial posts and which predates the C1 Cursus, has been mentioned previously. Figure 2.21 shows that they lay on the sightline from inside the HE1 Enclosure towards the sun as it would have set behind the later

position of the C1 Cursus at the mid winter solstice (Framework Archaeology 2006, 74–81). This raises the possibility that (contrary to the sequence expressed in Volume 1) the HE1 Enclosure and the (at least three) postholes were contemporary, and thus predate the C1 Cursus. If correct, then the HE1 Enclosure and the post-hole complex would have been contemporary, and acted in tandem. Alternatively, the HE1 Enclosure may have been built specifically at a location which was already of some importance, and from which people could view the sun as it set behind an already existing posthole complex. We have suggested in Volume 1 that even after the construction of the C1 and C2 Cursus, the HE1 Enclosure still acted as a meeting place for a select group of individuals from the community who continued to meet at mid winter to view the sun setting behind the mound of the C1 monument (see Plate 2.9).

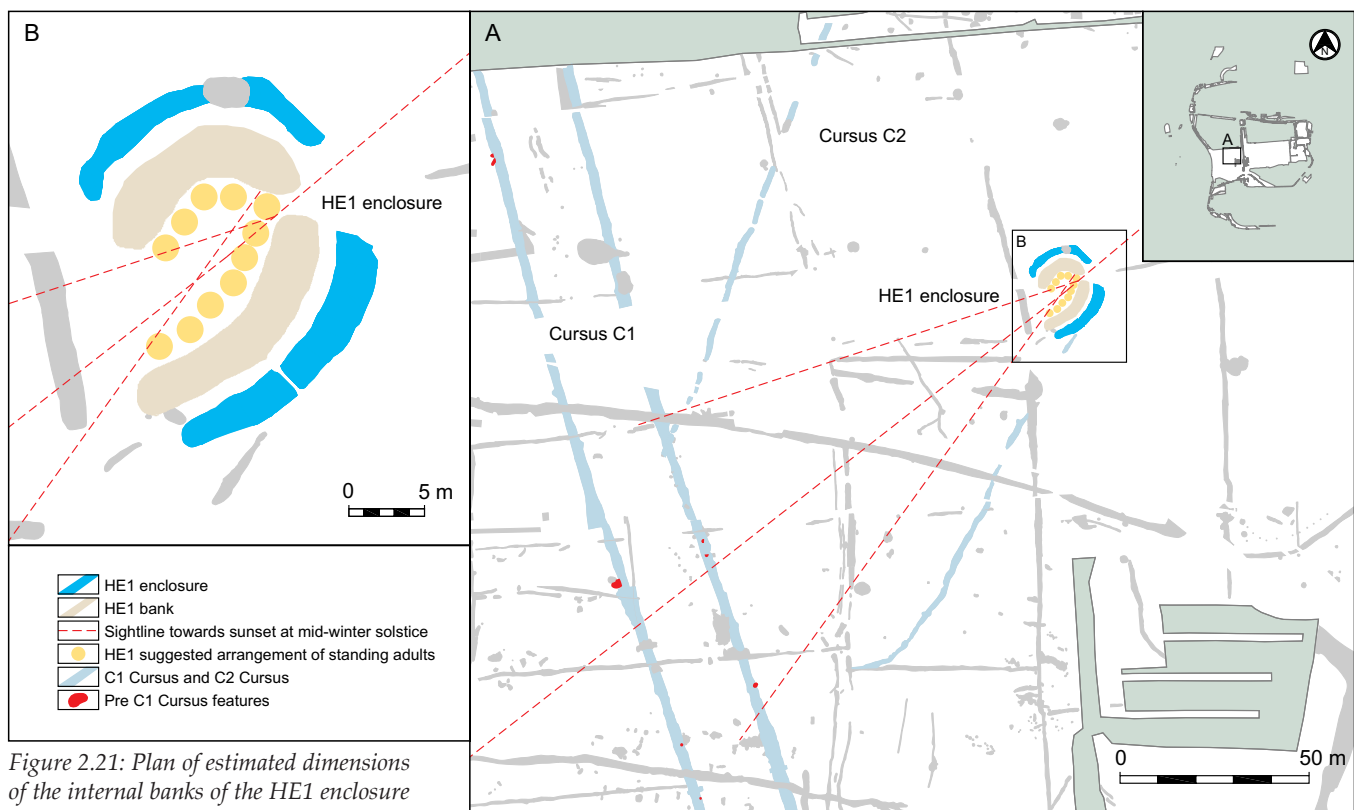


Figure 2.21: Plan of estimated dimensions of the internal banks of the HE1 enclosure and suggested arrangement of standing adults with site lines

### Comparison with other circular monuments in west London

The HE1 Enclosure is one of a number of small prehistoric circular or sub-circular monuments that have been excavated in West London. Figure 2.22 compares the plan of these monuments. Table 2.9 shows that small circular monuments are generally very poorly dated, but that they appear to have been constructed from the late 4th to the early 2nd millennia BC. We will consider all the examples from the Neolithic / Early Bronze Age here (for references see Table 2.9).

Monument architecture included internal mounds (Hurst Park) and internal banks, although the evidence of the location of any earthen upstanding features is very slight at all sites. There are no distinctive morphological indicators, other than some of the horseshoe shaped enclosures, which appear to date to the late 4th millennium BC. The two ring ditches excavated during the extension of the northern runway at Heathrow in 1969 produced inconclusive dating evidence, nor was there clear evidence for the original above ground architecture of the monuments.

The Ashford Prison ring ditch may have originated as a horseshoe shaped enclosure but the circuit was subsequently closed (Carew *et al.* 2006, 18), while the Staines Road Farm monument had a small entrance in the north-east. The excavators of both monuments have drawn attention to the emphasis on the north-eastern part of the circuit of these sites. In addition, the open side of the inner enclosure at Manor Farm Horton also faces to the north-east. It has been suggested that the gap in the circuit of the Shepperton site was aligned on the mid summer sunrise, (as with the HE1 Enclosure) although the excavator is doubtful of this (Jones 2008, 77). The presence of Plain Bowl Neolithic pottery at the Shepperton site suggests an earlier phase of activity, and the inner enclosure at Horton is certainly associated with Plain Bowl pottery. The ditch of the inner enclosure also cut three postholes, whilst another three appear to have rotted *in situ* (Ford and Pine 2003, 20). This suggests the site was the location of a timber structure prior to the construction of the inner ditch, a situation similar to the post complexes pre-dating and contemporary with the C1 Cursus.

The Ashford Prison ditch was cut by a posthole circle after it had silted up.

Construction of the outer ditch at Horton and its association with Peterborough Ware is the clearest demonstration of the tendency to modify and re-invent existing enclosures (including perhaps Staines Road Shepperton?) or to construct new monuments (Ashford Prison). Both the Shepperton and Horton outer enclosure were receptacles for deliberate deposition of human and wolf / dog remains (Shepperton) and containers manufactured from birch bark (Horton). Both the enclosures at Imperial College contained human cremations associated with Peterborough Ware pottery inside their circuits, which have produced radiocarbon dates of approximately 3000 BC (A. Barclay pers. comm.)

The range of the finds assemblage at Horton (including extraordinary bark containers) and the burials at Staines Road Farm Shepperton illustrate the range of organic material that may once have existed at the Heathrow Terminal 5 sites. However, only the HE1 Enclosure contains anything

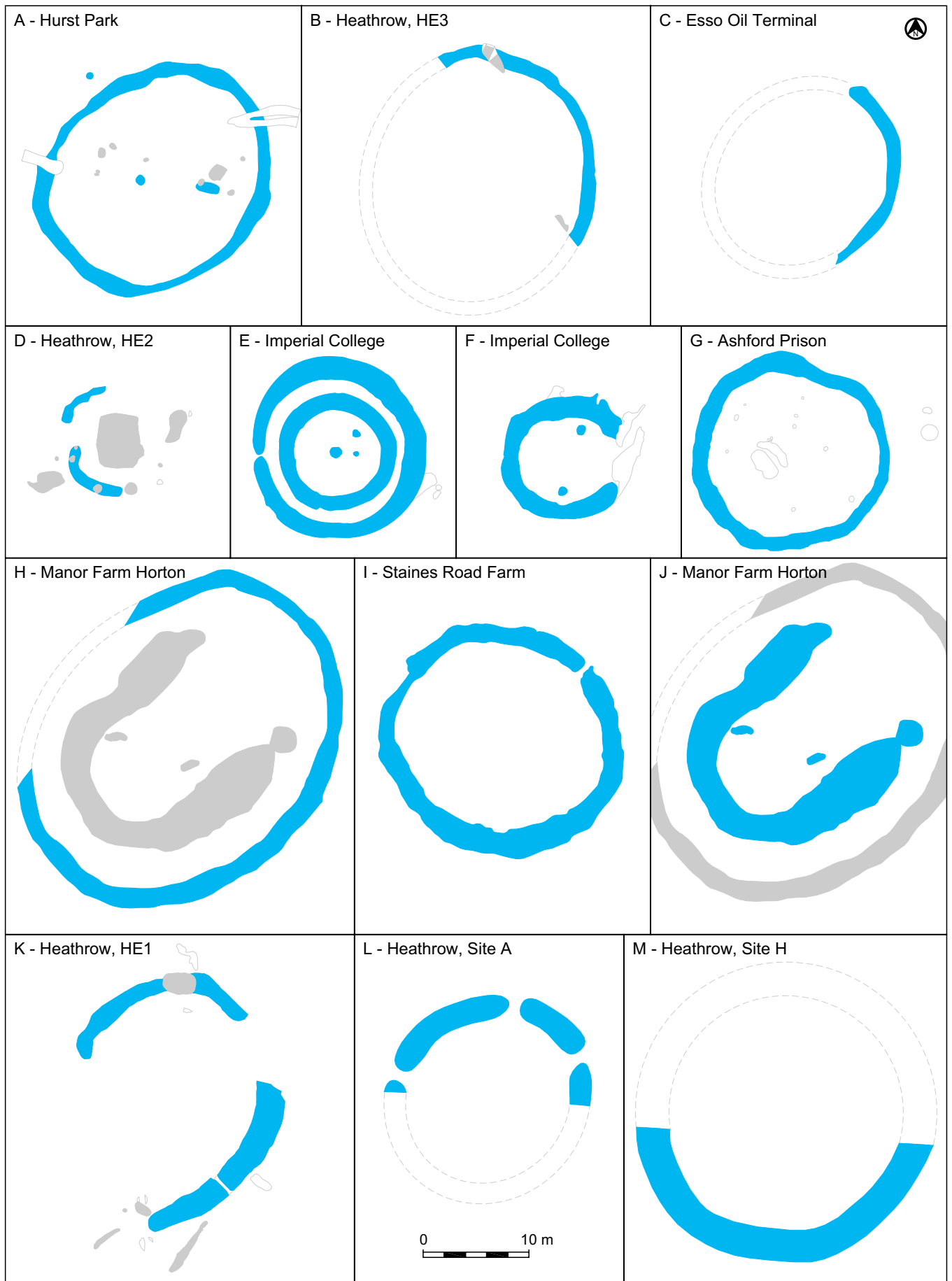


Figure 2.22: Comparison of Neolithic circular monuments in the West London area

approaching the quantity of inorganic finds from these sites (and that at Ashford Prison). We may therefore suggest that the HE1 Enclosure dates to the later 4th millennium BC.

## The cursus monuments

Table 2.10 compares the main attributes of the five cursus monuments at

Heathrow, and classifies them according to Loveday's (1985 and 2006) scheme. Several points are apparent from Figure 2.23 and Table 2.10:

- Despite the very large area excavated at Terminal 5, none of the cursus monuments were revealed in their entirety, leading to uncertainty over their exact classification,

particularly with regards length and form of terminal.

- The stratigraphic relationships between the four monuments are uncertain, with only the relationships between the C1 and C2, and the C2 and the C4 monuments apparent, and even these are tenuous.

Ref	Site Name	Construction Date	Monument	Monument Type	Artefacts	Internal Diam.	References
A	Hurst Park East Mosley	1700 - 1500 BC ?	Ring Ditch 23	Continuous sub-circular ovoid enclosure with internal mound	1 EIA sherd and 2 LBA pot sherds from ditch. Central burial with secondary series Collared Urn.	21 x 18	Andrews 1996
B	Terminal 5	2400 - 1500 BC ?	HE3 Enclosure	Circular ring ditch	Collared Urn/Beaker and later pottery, animal bone fragments and occasional flint flakes.	19	This volume
C	Esso Oil Terminal West Bedfont	3000 - 2000 BC ?	Ring Ditch	Circular (?) ring ditch	Grooved Ware.	18	Farrant 1971; WA unpublished report
D	Terminal 5	3000 - 2000 BC ?	HE2 Enclosure	Irregular incomplete "horseshoe" shaped enclosure	Grooved Ware, Peterborough Ware and transverse arrowhead.	10	This volume
E	Imperial College Sports Ground	3000 BC approx. C14	Double Ring Ditch	Double ditched circular enclosure	Peterborough Ware cremations inside ring ditch.	18	Crockett 2001, fig 2; C14 dates A. Barclay
F	Imperial College Sports Ground	3000 BC approx. C14	Penannular cremation enclosure	Single ditch open circular enclosure	Peterborough Ware cremations inside ring ditch.	17 inner circuit	Crockett 2001, fig 5; C14 dates A. Barclay
G	Ashford Prison	3400 - 2500 BC ?	Ring Ditch 1	Continuous circular enclosure	Peterborough Ware pottery, worked flint.	17.5	Carew <i>et al</i> 2006
H	Manor Farm Horton	3300 - 2900 BC approx. C14	Ring Ditch outer enclosure	Continuous oval enclosure	Peterborough Ware pottery, bark containers (radiocarbon dated), worked flint, antler and animal bone.	30 x 24	Ford and Pine 2003
I	Staines Road Farm Shepperton	3600 - 3100 BC approx. C14	Ring Ditch G	Sub-circular enclosure with narrow gap in the north east	Predominantly Peterborough Ware, Plain Bowl Ware pottery, worked flint, human and animal bone (wolf/dog), and radiocarbon dates.	20	Jones 2008
J	Manor Farm Horton	3600 - 3300 BC ?	Ring Ditch inner enclosure	Irregular "horseshoe" "U" shaped enclosure	Plain Bowl Ware, worked flint, animal bone and fragments of human bone.	9	Ford and Pine 2003
K	Perry Oaks/ Terminal 5	3600 - 3300 BC ?	HE1 Enclosure	Irregular "horseshoe" shaped enclosure with internal banks	Flint, burnt flint, fragments of animal bone and no pottery.	17	Framework Archaeology 2006; this volume
L	Heathrow Runway extension 1969	Undated	Site A	Sub circular interrupted ditch enclosure	Flint flakes.	15	Canham 1978
M	Heathrow Runway extension 1970	Undated	Site H	Circular ring ditch	Flint flakes.	20	Canham 1978

Table 2.9: Small circular Neolithic and Early Bronze Age enclosures in the Heathrow area

Monument	Bank type / position	Terminal (Loveday 1985 & 2006 classification, see also Barclay <i>et al</i> 2003, 219)	Length (m)	Width (m) centre lines of ditches	Area (ha) enclosed	Orientation degrees from OS North	Loveday 2006 classification
C1 Stanwell	1 internal mound	Northern rounded, adjacent to Colne branch Southern unknown, probably terminated at the break of slope between the Taplow and Kemton Park terraces (Ai, ?)	minimum 3600 probably 3800	23	8.7 ?	164	Mega Cursus
C2 Cursus	Inconclusive	Northern formed by C4 Cursus? Southern formed by C1 Cursus (?)	530 if C4 is the terminal	80 - 90	4.5 ?	24	Minor Cursus (?)
C3 Cursus	2 internal banks	Northern squared Southern possibly rounded (Bii, ?)	230 (or 470 if it joins C5)	19	0.43 ? (or 0.95) ?	15	Long Enclosure or Cursiform Long Enclosure ?
C4 Cursus	2 external banks	Western rounded Eastern unknown (Aii, ?)	possibly 82 but less than 640	21	0.17 ?	110	Long Enclosure ?
C5 Cursus	Unknown cropmark only	Northern rounded Southern rounded (Ai)	231 (or 470 if it joins C3)	19	0.4 ? (or 0.95) ?	19	Long Enclosure ?

Table 2.10: Comparison of Terminal 5 cursus monuments

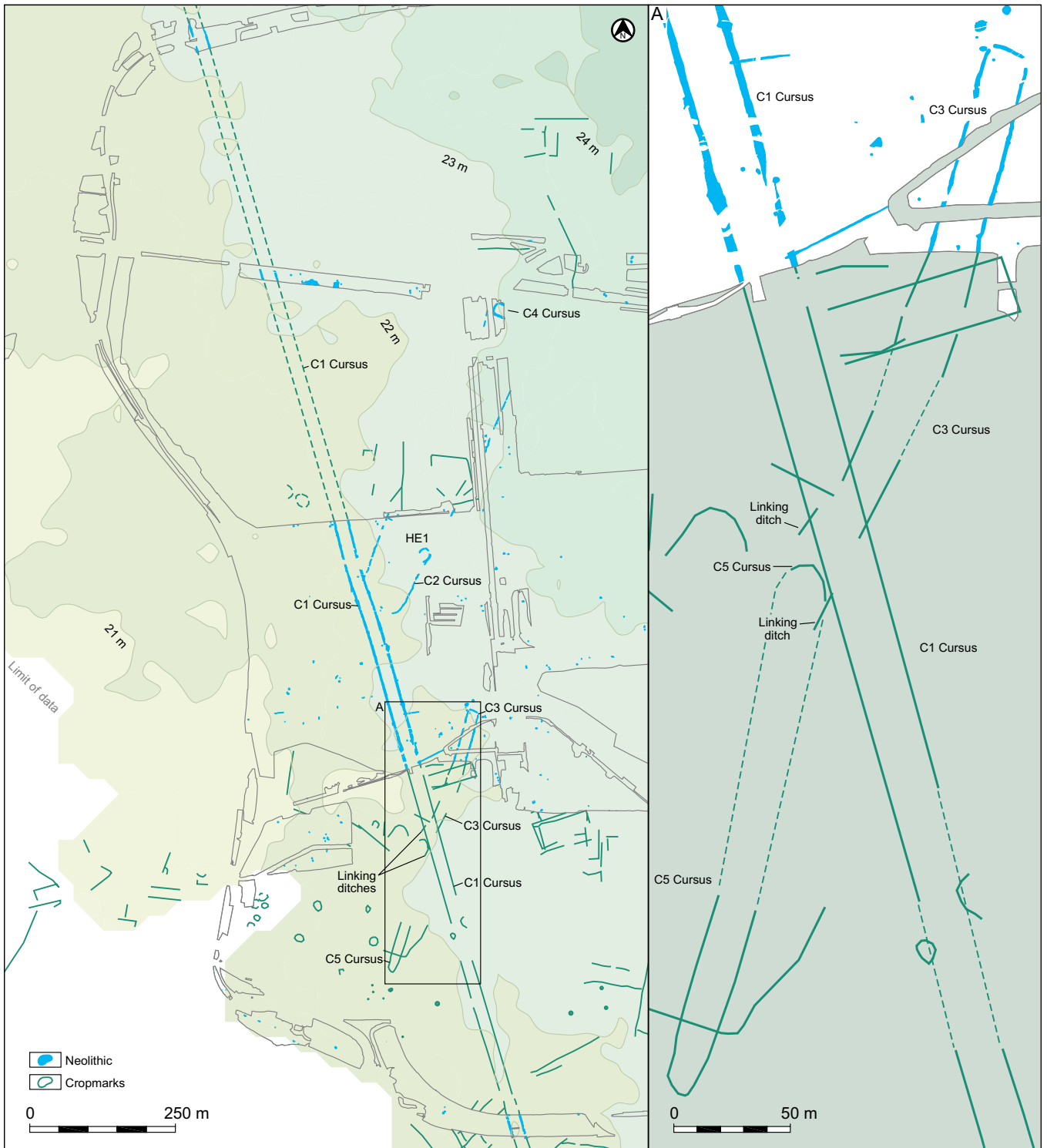


Figure 2.23: Terminal 5 cursus monuments in relation to local topography and crop marks

- The four excavated monuments probably represent four different classes of cursus.
- The bank architecture differs for each cursus.
- The C1 Stanwell is at least five times longer than either of the other monuments, although because of its

width, the C2 monument encloses almost half the area of the C1 Cursus.

- The C1 and the excavated portions of the C3 and C4 cursus are all geometrically regular in their plan. That is, there is little variation in the orientation or the separation between their ditches which are close to parallel. The C2 Cursus is geometrical-

ly more irregular, with variations in the separation of the ditches.

- The separation of the ditches of the C1, C3 and C4 cursus is very similar, varying from 19 to 23 m, and are thus narrow monuments. The C2 Cursus ditches vary from 80 to 90 m apart, and it is approximately four times wider than the other monuments.



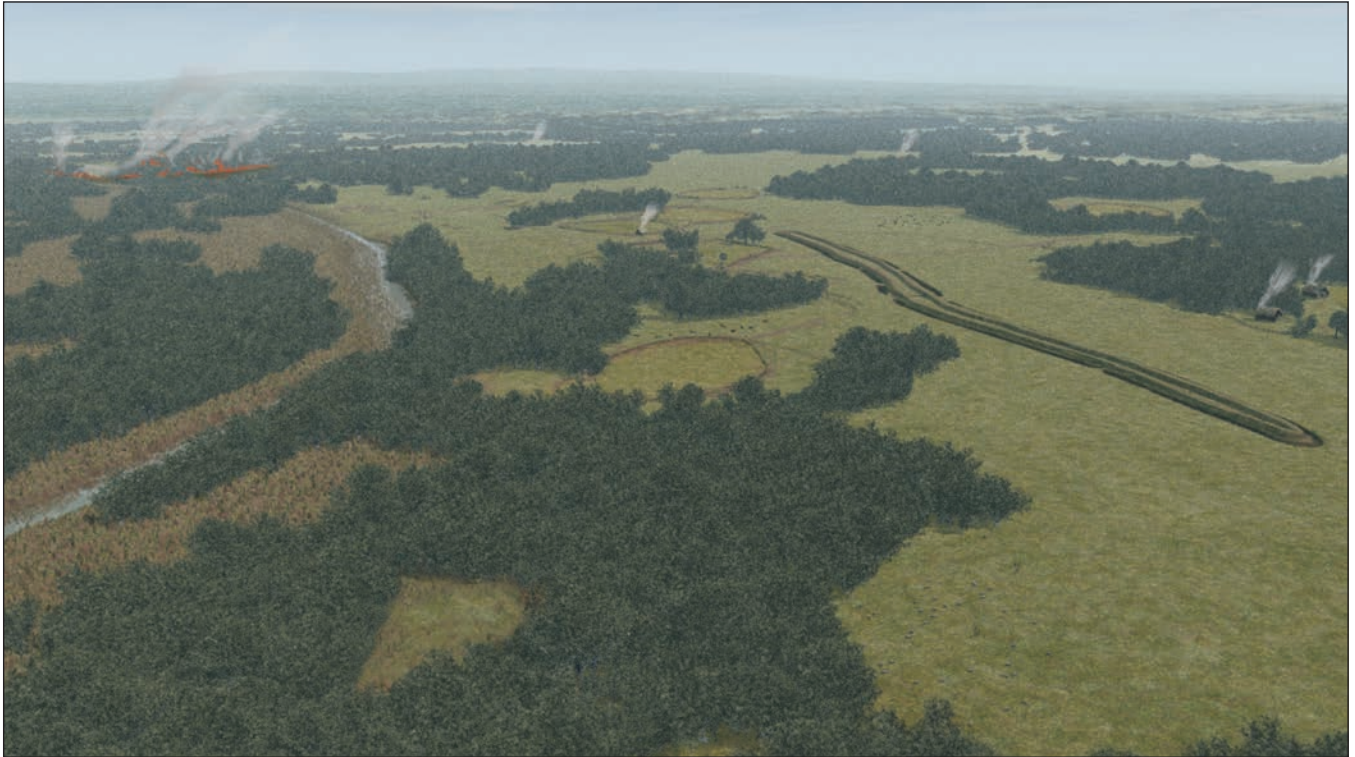


Plate 2.10: Artist's reconstruction of Neolithic monumental landscape prior to the C1 Cursus

In the absence of radiocarbon dates and only two tentative stratigraphic relationships between the monuments, it is difficult to be certain about the sequence of monument construction. We will describe how crop mark evidence can be interpreted to show that the (archaeologically unexcavated) C5 monument was later extended by being linked to the C3 Cursus, which in turn was overlain by the construction of the C1 Stanwell Cursus. In Volume 1, it was reported that the pits which formed the southern end of the northern C2 Cursus ditch cut the lower fills of the eastern C1 ditch (Framework Archaeology 2006, 72). The kink in the C1 Cursus was explained as a deviation to incorporate the location of the posthole complex described above. However, it is equally possible that the kink in the C1 Cursus was a result of the monument avoiding the southern terminal of the C2 Cursus, and that the pits were a later addition to the C2 monument to tie it into the new C1 Cursus. This would mean that the southern terminal of the C2 Cursus was originally open-ended, a not unknown, but very rare occurrence. Similarly, it is by no means certain that the ditch that the C4 Cursus overlies is part of the C2 Cursus, since evidence

for the course of the latter monument at its northern extent is tenuous.

We will commence our sequence with the construction of the C3 / C5 Cursus.

### The C3 and C5 Cursus

On the basis of aerial photographic evidence (see below), we consider the C3 Cursus to be the first of the four excavated monuments to be constructed (Fig. 2.23; see artist's reconstruction in Plate 2.10). The presence of the C3 Cursus was detected from aerial photographs and confirmed during excavation, although only 91 m of the NNE end of the monument was exposed. Unfortunately the remainder of the monument, together with its relationship with the C5 and C1 Stanwell Cursus, was probably destroyed during the extension of the southern runway in the late 1960s. The runway also destroyed the C5 Cursus, the evidence for which survives only as a transcribed crop mark. The crop mark evidence suggests that the C5 Cursus was originally a separate monument, but was subsequently joined onto the C3 Cursus prior to the construction of the C1 monument.

### Development and stratigraphy

The aerial photographs suggest that the C3 Cursus did not have a straight alignment (Fig. 2.23). However, the excavated portion of the cursus followed a fairly straight alignment (Fig. 2.24). The two roughly parallel ditches (approximately 19 m apart from the centre line of each ditch) were on average 1.3 m wide and 0.55 m deep, with straight or concave sides and base. Some variation with respect to shape, profile, dimensions and fill sequences was detected, which was due to both truncation and the segmented nature of the ditch construction. Neither ditch was straight but both meandered and kinked slightly; in one case this appeared to respect an earlier tree hollow (or perhaps a still upstanding tree).

A possible entrance to this monument may be detected in its north-western corner, immediately beyond which lay a number of intercutting pits containing quantities of Neolithic finds (Fig. 2.24). This entrance is marked by two rounded ditch terminals with a gap of 2.2 m, and the pit cluster is situated just under 9 m in direct alignment with

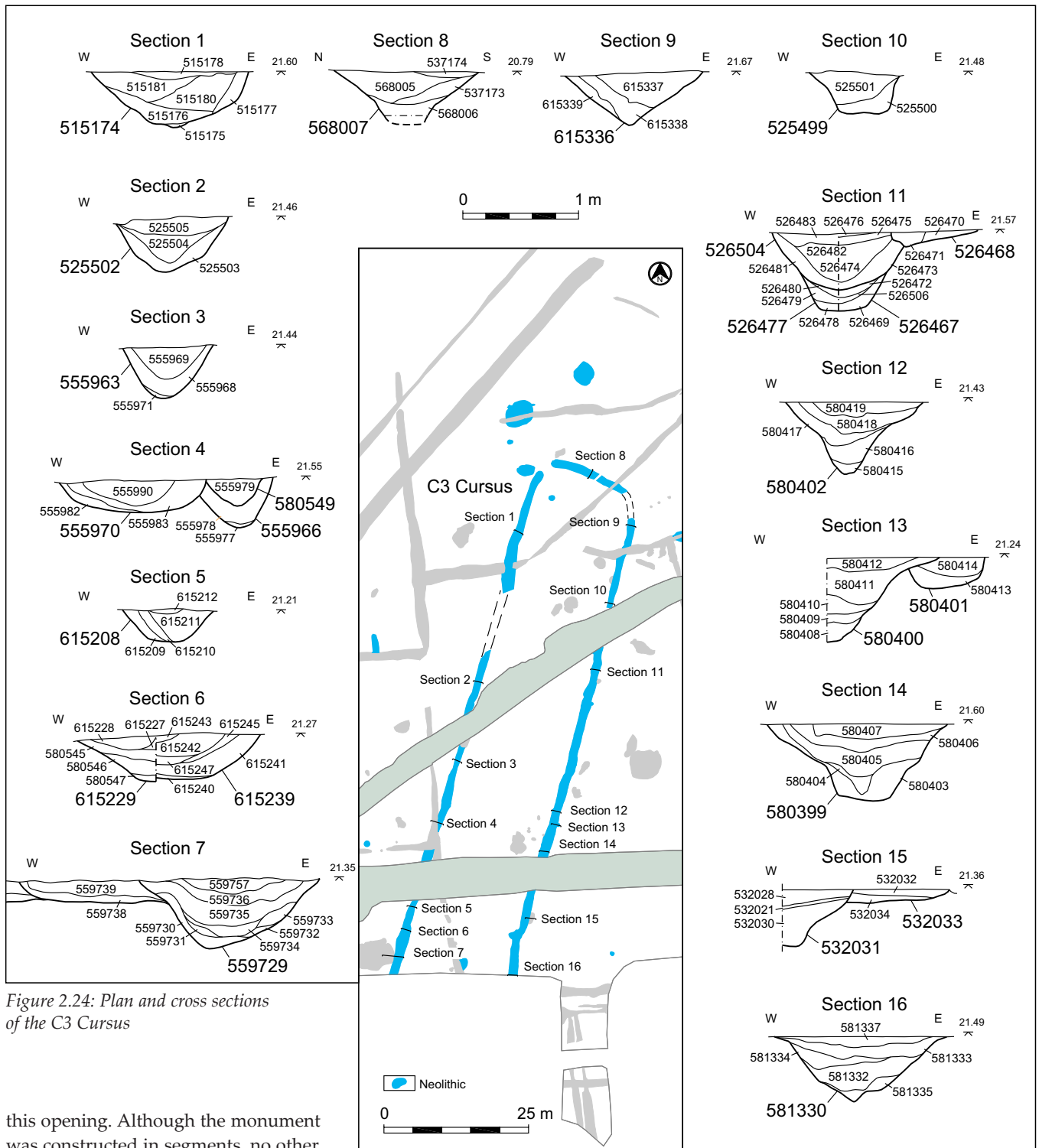


Figure 2.24: Plan and cross sections of the C3 Cursus

this opening. Although the monument was constructed in segments, no other definite access points were recognised, and all other breaks in the ditches were caused by modern truncation and intrusions.

Once outside the excavated area, the crop marks shows that the cursus starts to change alignment from SSW to south-west (Fig. 2.23). The 1943 topography shows that the 22 m contour changes here. In fact, the cursus seems to bend to follow the contour to

the point where the contour, the C3 and the C1 Cursus meet. The total length of the C3 Cursus from the NNE terminal to the central bank of the C1 Cursus is approximately 205 m. The crop marks also show a rectangular enclosure running perpendicular to the C1 Cursus and cutting the C3 Cursus, but the date of this feature is unknown. It may correspond with post-medieval field boundaries shown on maps of 1748 and 1765 (see Chapter 5).

To the south-west of the C1 Stanwell Cursus, the crop marks show another separate cursus (the C5 monument) approximately 230 m long and 19 m wide. Crop marks show a possible terminal for the C5 Cursus approximately 11 metres to the south-west of the eastern C1 ditch. It would appear that the C5 monument became joined onto the C3 Cursus, since crop marks show the presence of two parallel linking ditches originating to the west and par-

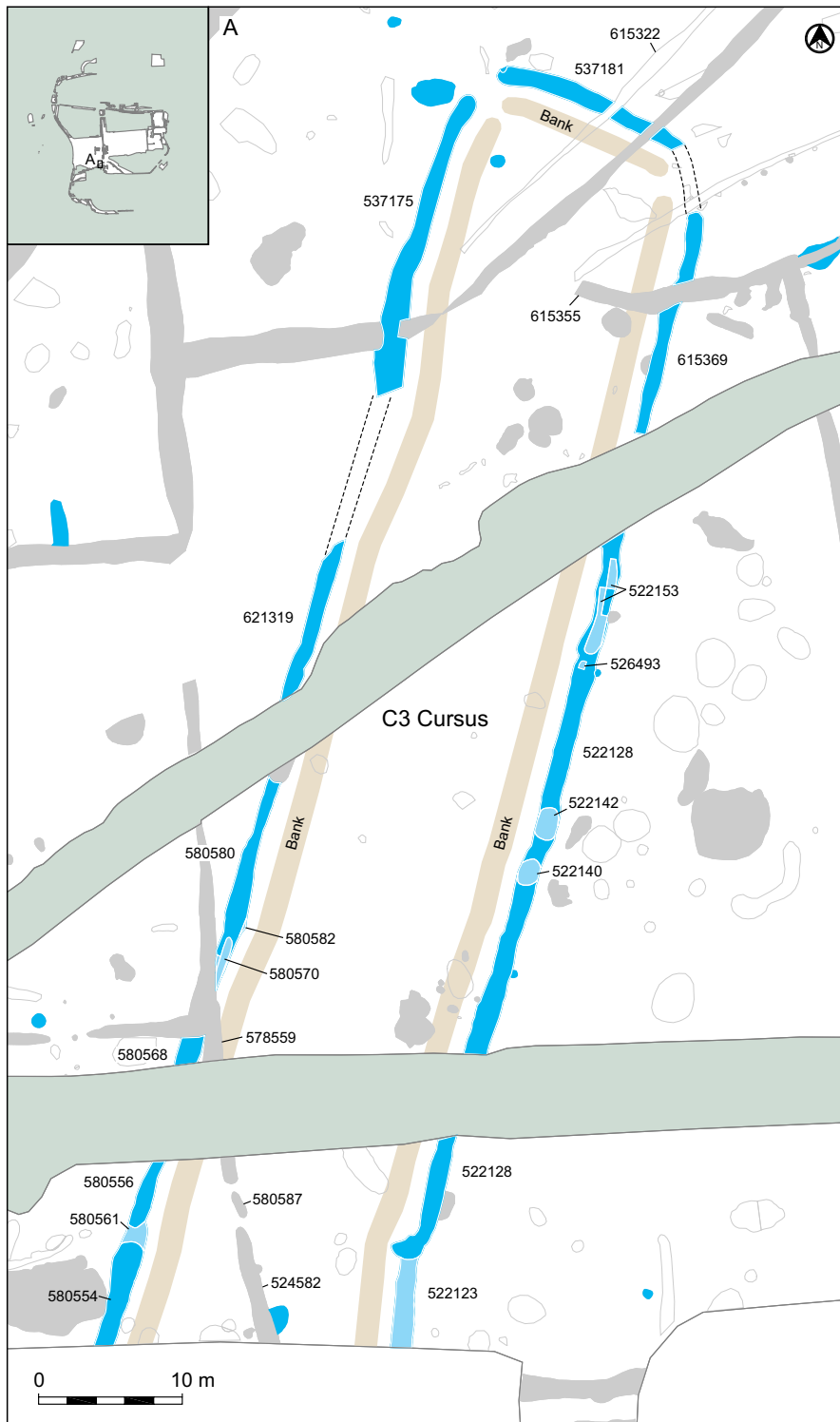


Figure 2.25: C3 Cursus ditches and position of banks

ticularly to the east of the C1 Cursus central bank. If these crop marks do form an extended monument consisting of the C3 and C5 Cursus, then the whole complex would have measured approximately 470 metres long. It is noticeable that the parallel linking ditches are not visible in the area of the C1 central bank. It is unknown whether this means that the C1 Cursus

post-dates the C3 /C5 complex, or whether the C3 /C5 complex ditches were dug up to but not over the C1 bank (possibly similar to the relationship between the C1 and C2 Cursus), or whether the ditches simply did not show as crop marks in that particular area. However, on balance we favour the interpretation that C3 Cursus predated the C1 Stanwell monument.

The crop mark evidence suggests that the C3 Cursus had a complex history of development, and this is borne out by the excavated evidence. The site of the monument was cleared of woodland, as demonstrated by tree-throw 532033 which was cut by eastern cursus ditch (Fig. 2.24, Section 15). Also, in common with the C1 and C2 cursus, there is evidence for activity predating the construction of the monument in the form of pit/posthole 580401, which is cut by the eastern cursus ditch (Fig. 2.24, Section 13).

Both the western and eastern ditches show evidence in plan and in section of being dug in segments (Fig. 2.24), though whether this is the result of a gradual extension northwards and southwards of the monument, or whether they represent the subsequent re-cutting of the original ditches is uncertain. For example, the earliest feature in the western ditch is 580561, a short length of ditch or elongated pit, which when silted up, was extended to the south by 580554 and to the north by ditch 580556 (Fig. 2.25). The stratigraphy of the northern extension is obscured by the Bronze Age field ditches as they cross the cursus, but features 580568 and 580582 probably represent the northern continuation of 580556. Ditch 580556/58068/580582 measures approximately 22 m long before it in turn is cut by 580580. The upper fills of 580582 and 580580 are cut by a gully 580570, but this may be associated with the adjacent Bronze Age field boundary rather than deliberate recutting of the Neolithic cursus ditch. No further ancient extensions or recuts were detected as this ditch extended northwards as features 621319 and 537175, the divisions being due to modern intrusions.

The eastern ditch has a slightly less complex history (Fig. 2.25). In the south, ditch 522123 is cut by 522128, which runs northward, becoming 615369 after a modern intrusion. However, two pits (522140 and 522142) were cut through the middle fills of 522128, and apparently sealed by upper fills of the ditch. No finds were recovered from either of these features. Further north, two irregularities

C3 Cursus	Struck flint			Pottery					
				Unidentified		Plain Bowl Ware		Peterborough (Mortlake) Ware	
Ditch	Feature	Debitage	Tools	No. sherds	Weight (g)	No. sherds	Weight (g)	No. sherds	Weight (g)
North	537181	9	-	2	6	-	-	-	-
West	537175	8	1	12	13	6	5	-	-
	580580	39	1	5	6	-	-	2	3
	580554	10	-	-	-	-	-	-	-
<b>Total West</b>		<b>57</b>	<b>2</b>	<b>17</b>	<b>19</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>3</b>
East	522128	20	1	1	4	-	-	-	-
	522123	1	-	1	1	-	-	-	-
<b>Total East</b>		<b>21</b>	<b>1</b>	<b>2</b>	<b>5</b>	-	-	-	-
<b>Total</b>		<b>87</b>	<b>3</b>	<b>21</b>	<b>30</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>3</b>

Table 2.11: Lithic and pottery assemblages from the C3 Cursus

(526493 and 522153) were interpreted as the base of the original cut of the eastern ditch, which had subsequently been recut by 522128. Given the presence of an early feature such as 580561 in the western ditch, such an interpretation is entirely possible, but equally features 526493 and 522153 could simply represent a more uneven base in this part of ditch 522128, and not separate features at all. The northern terminus ditch (537181) had a rather more straightforward history, and would appear to have been constructed in a single phase.

Two scenarios can be envisaged for the development of the excavated portion of the C3 monument. Firstly the monument developed through the progressive addition of ditch segments before being finally terminated with the northern ditch 537181. If so, then some time would have elapsed between the digging of each segment, since each new segment cut through the already silted profile of the previous segment. This would also suggest that the monument was, for much of its history, a work in progress. The second interpretation, and the one favoured by the excavators on site, is that the monument was laid out in one phase, and that the fills of the ditch segments represent the final phase of recutting and / or cleaning of the original monument. This would suggest a more coherent original 'scheme' which was then maintained over a period of time.

If we consider the excavated and the crop mark evidence together, then it is possible that the C3 Cursus was a north-eastward extension of the C5

Cursus. However, there would be nothing to preclude the continued maintenance and cleaning of the ditches of the monument, whether before or after its constituent parts were linked together. When compared with causewayed enclosures, evidence for recutting and maintenance of cursus ditches is relatively rare although this has been noted at the Lesser Stonehenge monument and Holyrood North (eg Loveday 2006, 38). The recutting of causewayed enclosure ditches is often associated with the deliberate deposition of artefacts and animal remains, again in contrast to the C3 Cursus. This suggests that the maintenance of the C3 ditches was aimed at maintaining the above ground architecture of the bank(s), rather than the deposition of artefacts.

### Architecture

Determining the number and position of banks constructed from the up cast of the ditches is particularly difficult for the C3 Cursus. The sections through the ditches often provide little or contradictory evidence, which is unsurprising given the complicated history of development described above. For example, section 615208 (Fig. 2.24, Section 5) through the western ditch suggests filling from the west, outside the monument, whilst section 515174 (Fig. 2.24, Section 1) suggests filling from the west, followed by the east and finally from the west again. Section 580402 (Fig. 2.24, Section 12) through the eastern ditch suggests the presence of a bank to the west, inside the monument, as does section 615336 (Fig. 2.24, Section 9). However,

section 525499 (Fig. 2.24, Section 10) suggests filling from the east, outside the monument. Unlike the Stanwell C1 Cursus, the evidence from later ditches which cross the C3 monument is also far from conclusive in determining the position and number of banks. No Bronze Age ditches completely traversed the C3 Cursus since they were either interrupted by modern intrusions or the excavated area did not extend far enough. However ditch 615355 visibly narrows to the west of the eastern cursus ditch, and sections show it is slightly shallower by approximately 10 cm in the narrower segment (Fig. 2.25). To the south, the Bronze Age ditch complex (524582) becomes a shallow segmented pit 580587 before resuming as a truncated ditch segment 578559. Finally, post-medieval ditch 615322 narrows slightly after crossing the northern terminus ditch 537181, then widens slightly before narrowing appreciably just inside the western C3 ditch. This is the opposite pattern to that seen where Bronze Age ditches cut across the central bank of the C1 Cursus. Taken together, the slender evidence from the ditch profiles and plans of the later ditches crossing the C3 Cursus would suggest the presence of a low bank running parallel to and just inside each cursus ditch (Fig. 2.25). If we allow truncation of *c.* 0.35 m to the ditches as recorded, this would translate into each bank being approximately 1.6 to 1.7 m wide and 0.7 to 0.8 m high. However this evidence is very slender and given the history of the development of the monument, the architecture may have changed over time and along the length of the cursus.



Figure 2.26: Distribution of lithic and pottery assemblages from the C3 Cursus

### Chronology

Only a small number of finds were retrieved from the ditches of this monument (Fig. 2.26; Table 2.11). Stratigraphically the finds are distributed mainly within the middle and upper ditch fills, with little from the basal fills. The lithic assemblage is characterised by flakes and other debitage produced using hard hammer technique, and as such can be dated no closer than the Neolithic. Three refitting flakes were contained in feature 522123, the southern segment of the eastern ditch, showing that flint working had occurred close by. The retouched tools consisted of two awls and a retouched flake, again of a general Neolithic date.

The majority of the small pottery assemblage was unidentifiable, but six tiny sherds of Neolithic Plain Bowl Ware were located in the northern terminus of ditch 537175 adjacent to the entrance (see Fig. 2.27, Section 15). Two very small sherds of Peterborough (Mortlake) Ware were located in segment 580580 of the western ditch (see

Fig. 2.27, Section 16). The very small size and poor condition of the pottery limits the value of the assemblage for dating: the material may be residual or intrusive, and is likely to derive from activity outside the monument rather than inside (see below). The sherds would indicate a date of between *c* 3600 to 3300 BC for the Plain Bowl Ware, and 3400 to 2500 BC for the Peterborough Ware. Probably the closest we can date the origins, modification and disuse of the C3 monument is, like the other Terminal 5 linear monuments, to the last half of the 4th millennium BC.

### Finds distribution

Figure 2.26 and Table 2.11 show that the majority of the finds from the C3 Cursus are located in the western ditch, with concentrations at the north-western entrance and mid way along its length. However, this distribution must be seen in the context of the other Neolithic features and monuments in the vicinity of the C3 Cursus such as the C1 Stanwell Cursus, the two gullies (529516/52952 and 527233) which

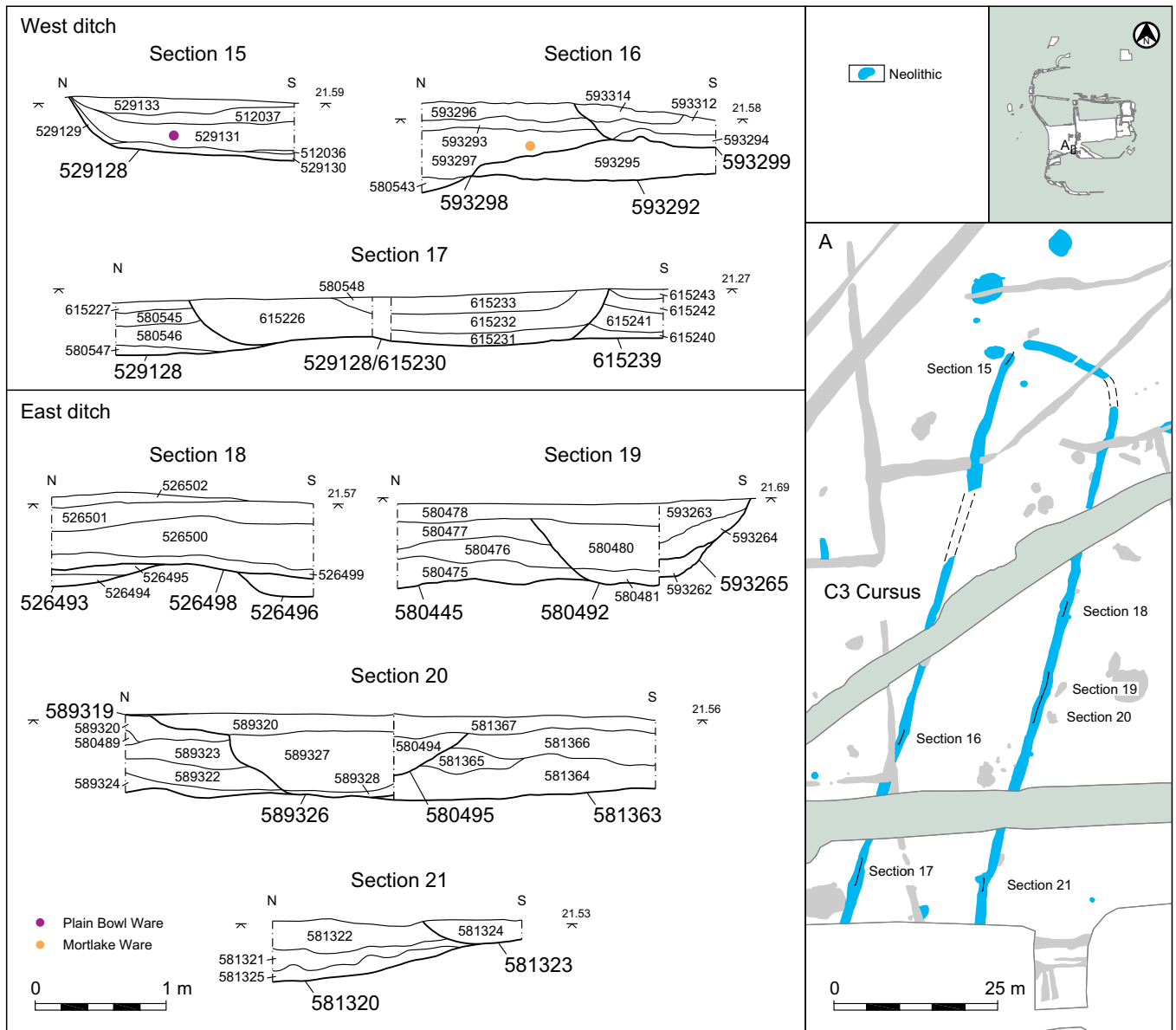


Figure 2.27: Long sections of C3 Cursus

predate the C1 Cursus and the series of intercutting pits (527117, 527135 and 527142) approximately 10 m to the north-west of the C3 entrance.

Seen in this light, the distribution of finds in the C3 Cursus ditches would seem to be the product of activity in the area defined by the C1 and C3 cursus and the two gullies and intercutting pits, rather than activities within the C3 Cursus itself. If our interpretation of the crop mark evidence is correct, sometime after the linking of the C3 and C5 cursus to form one large monument, the complex was cut a cross by the extraordinary C1 Stanwell mega-cursus, and it is this monument that we will turn to next.

### C1 Stanwell Cursus

The Stanwell Cursus was first recognised from crop marks on aerial photographs (see Fig. 2.23 above), although initially it was interpreted as a Roman Road. Excavation of a length of the cursus to the south of Terminal 5 (O'Connell 1990) conclusively proved that the twin parallel ditches were stratigraphically earlier than a Bronze Age field system, and that the few finds contained within their fills dated to the Neolithic. O'Connell also suggested that the cursus contained a single central bank, and noted from aerial photographs the 'kink' described in Volume 1 of this series (Framework Archaeology 2006, 57), which we now

know to correspond with the junction of the C1 Stanwell and C2 cursus monuments.

Observations by the Museum of London of a section across the cursus to the north of Terminal 5 at Moor Lane, Harmondsworth, were also reported in the Surrey Archaeological Unit publication of 1991 (Cotton 1990, 29–32). It has become clear during the analysis for this publication that whilst the locations provided for the cursus in these earlier publications were reasonably accurate for their day, they were undertaken prior to the widespread use of digital survey methods. The location of the Moor lane watching brief for example (Cotton 1990, fig. 19),

Excavation or notable point along cursus	Distance between points / areas (m)	Length of cursus exposed by excavation area (m)	Source
North western terminal at Biggley Ditch	400	0	O'Connell 1990
Moor Lane Watching Brief	809	40	Cotton 1990
Terminal 5 Areas 15 and 16	390	48	Site code PSH02, this volume
Terminal 5 Area 42a	428	17	Site code PSH02, this volume
Perry Oaks Bed B (site code WPR98) MoLAS Perry Oaks	620	444	WPR98 and POK96: Framework 2006
Terminal 5 Area 28	54	43	Site code PSH02, this volume
Park Road Stanwell Areas 1b 7 and 8	120	90	O'Connell 1990
Park Road Stanwell Areas 12 and 13	54	30	O'Connell 1990
South eastern limit of cropmark	214	0	O'Connell 1990
Hypothetical terminal at break of slope formed by the boundary between the Taplow and Kempton Park gravel terraces	0	0	This volume
<b>Total (m)</b>	<b>3089</b>	<b>712</b>	

Table 2.12: Stanwell C1 Cursus: distances between excavations and monument lengths

does not correspond closely with the projected alignment of the C1 Cursus as observed from digitally plotting the Terminal 5 excavations and crop mark evidence. Thus this publication relies on the excavated evidence from Terminal 5 when considering the alignment of the monument.

Excavations at Perry Oaks Sludge works by MoLAS in 1996 and Framework Archaeology in 1999 (site codes POK96 and WPR98) recorded a 244 m length (with short unexcavated lengths) of the monument, and this has been described in detail in Volume 1 (Framework Archaeology 2006, 47–60). The Terminal 5 excavations (site code PSH02) from 2002 to 2004 included Areas 45, 47, 49 and 89b which added to the section of the monument described in Volume 1. This resulted in a continuous length of 445 m of the monument being recorded in the central Terminal 5 area. In addition, two further small lengths of the cursus (Area 42a and Areas 15 and 16) were recorded to the north-west of the central area of the Terminal 5 along with a similar small length (Area 28) to the south-east.

Table 2.12 shows the distances between each excavated area of the cursus and the length of monument exposed in each area. It can be seen that out of a known length of 3089 m, 712 m (or 23%) has been exposed and investigated in varying detail. This equates to almost 19% of the total projected length of approximately 3800 m.

### Location and orientation

The location and orientation has been discussed in some detail elsewhere (O'Connell 1991) and will only be summarised here. Crop marks indicate that the monument ran for at least 3.6 km from the Colne valley in the north-west to Stanwell in the south-east (Fig. 2.18). The northern terminal was apparently rounded in plan before destruction through gravel extraction and lay close to the Biggley Ditch, an arm of the Colne which originally formed part of the Middlesex county boundary. The southern terminal was destroyed beneath the housing of Stanwell, but it is likely that it lay close to the marked topographic break in slope caused by the boundary of the Taplow and Kempton Park Thames Gravel terraces. If correct, then the total length of the Stanwell Cursus would have been approximately 3.8 km (see Fig. 2.18 above). The map (see Fig. 2.23 above) shows how the cursus runs along and almost defines the 22 m contour that separates the Colne Valley floodplain from the Taplow terrace underlying Heathrow. In plan the Stanwell Cursus is remarkably straight, even accounting for minor deviations discussed above. We propose that the cursus was constructed along a pre-existing pathway of great antiquity to physically link and tie together numerous important places along the route such as the remnants of the Late Mesolithic midden and pits, the timber post complex, the possible settlement consisting of pits, posts and gullies in Area 49 and the C3 Cursus (see above).

The Dorset Cursus performed a similar function by linking together the separate long barrows along its course (Barrett *et al.* 1991, 58). Within the Perry Oaks / Terminal 5 excavations, the Stanwell Cursus makes an almost imperceptible deviation (the 'kink' in Framework Archaeology 2006, fig 2.11) to accommodate the locations of the Late Mesolithic pits and the timber posthole complex. This location was subsequently further enhanced by becoming the terminus of the C2 Cursus. The ditches in the kinked section, c 150 m long, are also slightly shallower than those to the north and south, suggesting that this section may have been constructed separately, perhaps by a different construction team. We suggest, therefore, that the C1 Cursus was excavated in relatively short lengths by different teams, but within an overall rigid plan.

The uniformity of the cursus over c 3.8 km suggests that it was laid out in a landscape that was at least locally cleared. We have previously discussed pollen evidence from the pre-cursus period which suggests the landscape had undergone considerable clearance, and the various tree-throws cut by the C1 Cursus attest to this. Soil micromorphology analysis of samples from the C1 Cursus from the Perry Oaks and Terminal 5 excavations provides further insight into the clearance process:

*There is evidence of clearance of woodland by the use of fire from along the length of the Stanwell Cursus (Perry Oaks to Area 49). In the Terminal 5 thin sections,*

*reddened (rubefied) mineral grains, rubefied soil fragments with embedded charcoal ('baked clay'), and textural pedofeatures formed from reddish clay and intercalated coarse and fine charcoal, all testify to disturbed soils and burning.*

*It is interesting to note that micromorphological features indicative of clearance fires are also found in cursus ditch fills at Perry Oaks. These are textural pedofeatures that include abundant fine charred organic matter/charcoal.*

*Along the line of the Stanwell Cursus therefore, there are apparent soil records of soils being burned ('baked clay') and soil wash probably encouraged by the presence of ash (charcoal-rich textural pedofeatures) from burned woodland/scrub. Certainly fragments (papules) of the last are present in cursus ditch fills, but there are also features indicative of charcoal-rich clay wash into the ditch itself, implying some cursus ditch (and bank) construction almost immediately after clearance by fire, given the rapid weathering of ash in western temperate regions (generally days rather than weeks) and enhanced earthworm burrowing once toxic-levels of potassium have been reduced by this weathering; these textural pedofeatures of clearance by fire origin have not been biologically worked (Courty et al. 1989, fig 7.2).*

*(Mcphail, CD Section 19)*

It is worth recalling that the pollen report for pit 527200, which predates the C1 Cursus, observed many micro-charcoal particles and larger pieces of charcoal – evidence of local fires (Peglar et al., CD Section 16). This would seem to provide corroborating evidence for the soil micromorphology study, and strongly suggests that the already opened canopy was further cleared by burning the remaining trees and vegetation to make way for the construction of the cursus.

As discussed, the C1 Cursus was very carefully aligned to incorporate special locations. It may even have been that the course of each ditch was marked on the ground with rope for the construction teams to follow. The Dorset Cursus contained clear examples of deviation from the main

course once the sighting point the construction team was aiming at (eg a long barrow) temporarily disappeared from view (Barrett et al. 1991, 47). With the Stanwell Cursus, even necessary deviations, such as the kink described above, were accommodated almost imperceptibly. Achievement of such uniformity would suggest that the length of time in which the whole cursus was set out was encompassed within a single, or at most two generations, since it suggests a singularity of purpose, planning and execution. The T5 excavations have revealed a complex history of back-filling and re-cutting over a section of the cursus (see below), and these re-workings may have spanned a much longer period of time. However, they appear as re-workings within the template of the original layout.

### ***Summary of the Stanwell cursus as revealed by excavation***

This section will summarise the Stanwell Cursus in each of the areas where it has been excavated, starting at the most north-westerly exposure at Moor Lane (Cotton 1990) before moving south-easterly, through Perry Oaks and Terminal 5 excavations (Framework Archaeology 2006 and this volume) and ending at the most south-easterly excavations at Park Road Stanwell (O'Connell 1990).

#### ***Moor Lane***

The Moor Lane watching brief was undertaken under difficult circumstances by the Museum of London in 1982 and recorded approximately 40 m of the Stanwell C1 Cursus

(Cotton 1990). The site was located approximately 400 m from the north-western terminal (O'Connell 1990, fig. 4). The ditches were 22.6 m apart, the eastern ditch 1.9 m wide and 0.6 m deep, with the western ditch narrower and shallower (1.2 m and 0.45 m respectively). Only three flint flakes were recovered from the ditches.

#### ***Areas 15 and 16***

These two adjacent excavation areas mark the most north-westerly extent of the Terminal 5 investigations of the Stanwell C1 Cursus, and lie 809 m to the south-east of the 1982 watching brief at Moor Lane (Cotton 1990, fig. 19).

A 48 m length of the C1 Cursus was exposed in this area, and the two ditches of the monument were approximately 22.1 m apart. The ditches were shallow with an eroded 'U' shaped profile, and contained for the most part the usual two or three-fill sequence. Both ditches had been cut and disturbed by later archaeological and modern features.

The western ditch (588324) was approximately 0.6 m deep, with the base varying between 21.4 and 21.2 m aOD (Plate 2.11). The western ditch cut through the edge of a palaeochannel which was filled with a mottled yellowish alluvium. The full extent of the channel was not revealed due to the restricted extent of the site, but the alluvial deposits appeared to be becoming more calcareous and tufa-like towards the west (Fig. 2.28). Certainly, the medieval and later features excavated in Area 18 to the west were cut through a thick tufa deposit,



Plate 2.11: Western ditch (588324) of C1 Stanwell Cursus cutting edge of palaeochannel



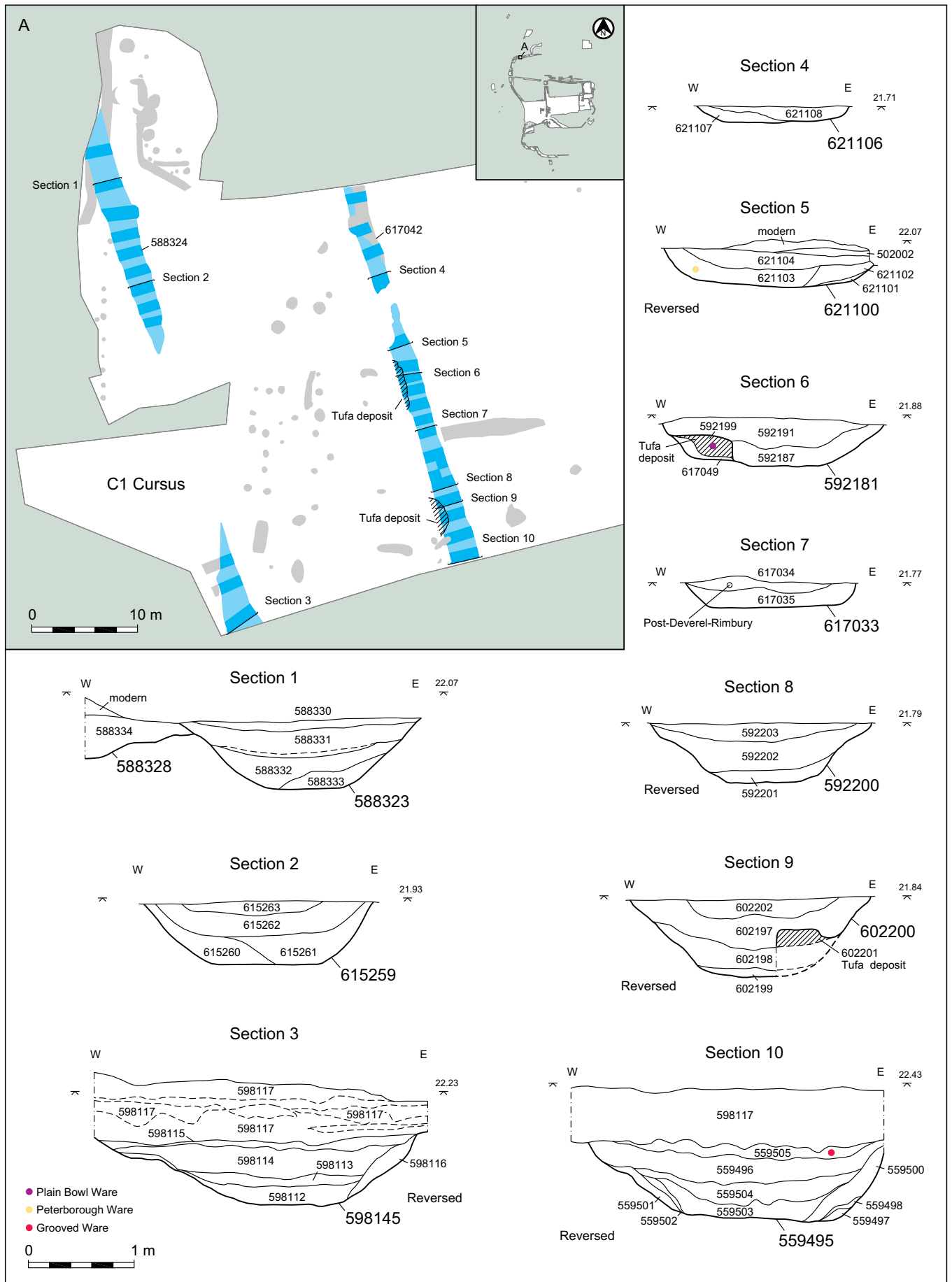


Figure 2.28: C1 Stanwell Cursus in Areas 15 and 16



Figure 2.29: Distribution of lithic and pottery assemblages from the C1 Cursus in Areas 15 and 16

and this may represent the main fill of the palaeochannel, which was presumably an ancient branch of the Colne.

A single broken Mesolithic microlith and a flake were recovered from the palaeochannel, suggesting occupation nearby in the millennia preceding the construction of the C1 Cursus. By the time the cursus was constructed, it is assumed the active margin of the channel had migrated to the west. In many ways, this sequence and signature of the location is similar to the burnt flint filled Mesolithic pits adjacent to the

palaeochannel and the C1 Cursus in the main Terminal 5 site (Framework Archaeology 2006, 43–4; see above).

A small quantity of intrusive medieval pottery was recovered from the western ditch, but none which was chronologically diagnostic of the Neolithic period. The flint assemblage consisted of Neolithic to Bronze Age flakes, with the occasional serrated piece and a few core preparation pieces which may date to the Mesolithic / Neolithic. Most of the lithics were recovered from the middle and upper ditch fills (Fig. 2.29).



Plate 2.12: Calcareous deposit in the base of the eastern C1 Cursus ditch



Plate 2.13: Calcareous deposit in the base of the eastern C1 Cursus ditch looking northward

The eastern ditch (617042) varied from 0.4 to 0.8 m deep, with the base varying between 21.04 and 21.46 m aOD (Fig. 2.28). The truncation model shows that approximately 0.5 m had been removed from the ground surface in 1943 and the surface of the excavation. This is corroborated by section 10 (Fig. 2.28) which shows that 0.5 m of truncation would have removed the topsoil, subsoil and the uppermost fills of the cursus. The eastern ditch produced sherds of pottery dating from the Neolithic to the Romano-British period (Fig. 2.29). Most of the sherds dating to the Bronze Age and later are small and located in the upper fills, and can be safely regarded as intrusive. Also contained in the upper fills were a sherd of Late Neolithic Grooved Ware and a sherd of Early Bronze Age grog tempered Beaker or Collared Urn. Of more importance for the dating of the cursus, a large sherd (42g) of Plain Bowl pottery was located within a well defined deposit of calcareous tufa situated against the western edge of the ditch near the base (Plates 2.12–3). The eastern edge of this deposit was nearly vertical, and almost abutted blue alluvial clay in the eastern part of the ditch. How the tufa deposit came to be present in the ditch caused much debate on site. The redeposited tufa presumably originated in palaeochan-

nel (588310) to the west, and the excavators suggested that the white calcareous material may have been used to coat the central bank in this area, giving it a distinctive appearance more akin to chalkland monuments. It is also possible that the tufa was deliberately dumped at one or two localised places along the eastern ditch. Subsequent erosion and solution by water in the ditch and runoff from the central berm into the ditch would have produced the vertical edge to the deposit. A similar white clay lining was reported from the ring ditch at Staines Road Farm Shepperton (Jones 2008, 9–10), a monument which produced a series of dates from the broad period 3600 to 3300 BC (Jones 2008, 73). Jones (*ibid.*, 74) has also drawn attention to the deliberate use of white clay and sediment to coat banks and ditches at the central henge at Thronborough in Yorkshire, and the mound at Longstone in Cornwall amongst others.

A single small sherd of Peterborough (Mortlake) Ware was also recovered from a secondary fill of intervention 621100 (Fig. 2.28, Section 5). Due to the unusual relationships between the fills, the excavator wondered if the fill containing the Peterborough Ware might represent a re-cut or separate feature but could find no evidence. Lithic finds were present in the ditch, with a particular concentration in intervention 559495 (Fig. 2.28, Section 10; Fig. 2.29). However, most of the struck flints (predominantly flakes and core fragments) throughout the ditch were concentrated in the middle and upper fills. These artefacts were of a general 3rd or early 2nd millennium date, although one possible Mesolithic burin from a lower fill in intervention 559495 was an exception to this pattern. In general, the lithic assemblage was produced by activity adjacent to the monument sometime after its construction, when it was an established part of the landscape and the ditches were gradually silting up.

Figure 2.30: C1 Stanwell Cursus in Area 42a

### Area 42a

Area 42a was located 390 m to the south-east of Areas 15 and 16, and 428 m north of the main Terminal 5 excavation area. All archaeological deposits immediately to the north and south of Area 42a had been destroyed by airport related activities and the Perry Oaks sludge works, leaving an 'island' of approximately 17 m of the Stanwell C1 Cursus intact. Even here, the truncation model shows that between 0.5 m and 0.75 m of deposits has been lost since 1943.

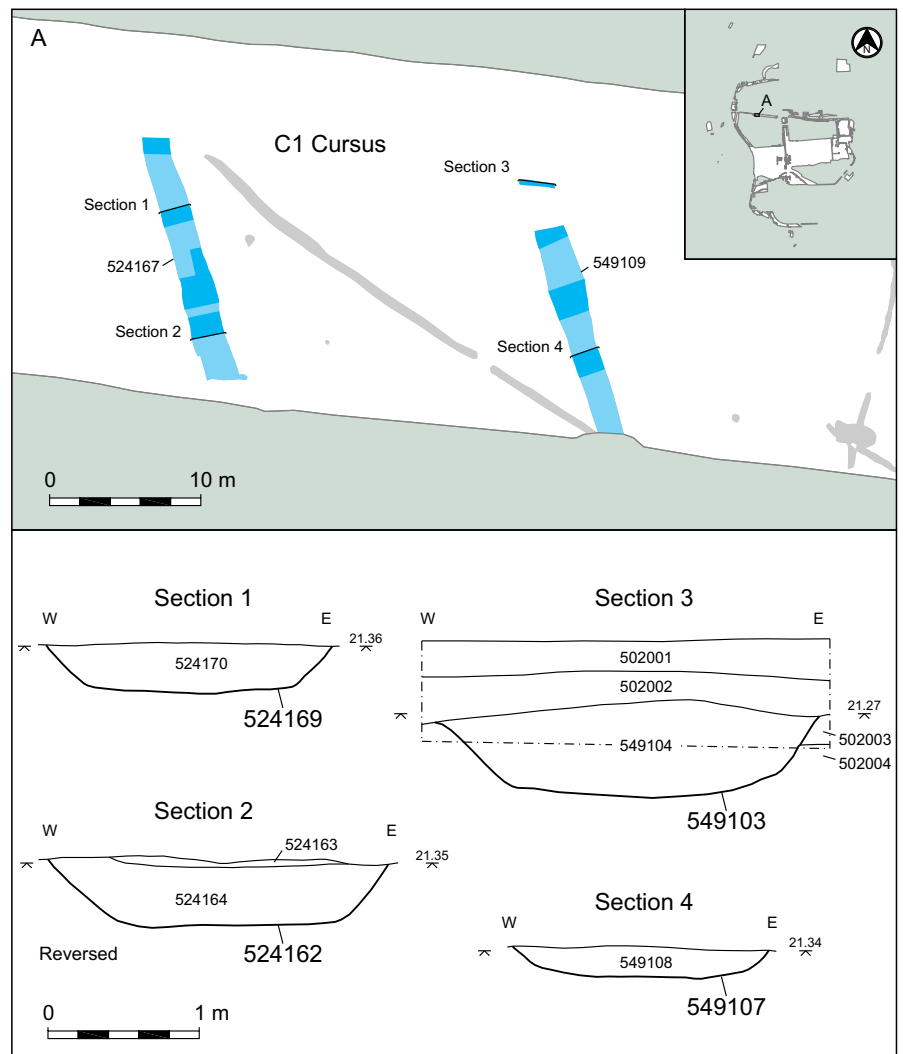
The two cursus ditches were approximately 23.5 m apart. The western ditch (524167) was *c.* 2.2 m wide and 0.3 m deep, with the usual shallow eroded 'U' shaped profile (Fig. 2.30, Sections 1–2; Plate 2.14). Finds included hundreds of tiny fragments of poorly preserved unidentified animal bone weighing a total of 149 g and a flint flake.



Plate 2.14: Western ditch (524167) of C1 Cursus in Area 42a



Plate 2.15: Eastern ditch (549109) of C1 Cursus in Area 42a



The eastern ditch (549109) was *c.* 2.4 m wide and 0.3 m deep, with a similar profile (Fig. 2.30, Sections 3–4; Plate 2.15). This ditch showed signs in plan that it was constructed in two conjoining segments, but sections through the length where the ditch narrowed detected no evidence of recutting. Finds consisted of a few flint flakes and some burnt flint. The fills of both ditches uniformly consisted of a single dark yellowish brickearth rich deposit, perhaps becoming darker towards the base.

A single diagonal ditch ran NW-SE between the cursus ditches, and although not securely dated, it has been assumed to date to the 2nd millennium BC. Unfortunately, this ditch did not provide relative depth data to allow us to interpret the position and height of the relict cursus central bank.

*Main Terminal 5 excavations:  
Areas 45, WPR98 bed B, POK96,  
Areas 49 and 89b*

The main Terminal 5 excavation area revealed a continuous length of 444 m of the C1 Cursus (Plate 2.16). As discussed above, this was excavated in three main phases (1996, 1999 and 2002–3). The 1996 and 1999 excavations have already been reported on in Volume 1 of this series (Framework Archaeology 2006), and that detail will not be repeated here, though is presented in Figures 2.31–2.

The distance between the centre lines of the ditches of the Stanwell Cursus in the central area varies from 23.3 m to 24 m (see below for further discussion). Figure 2.33 shows the variation in the profiles across the C1 Cursus in the central area, while Figure 2.34 shows flint and pot distribution in and around the cursus. The dating of the construction of the monument and how it was constructed will be discussed in further detail below. At present, it is worth noting that the 'kink' described in Volume 1 (Framework Archaeology 2006, 57) as the C1 Cursus bends around the terminal of the C2 Cursus is even more pronounced when viewed in detail. We have already described the posthole complex which



Figure 2.31: C1 Stanwell Cursus in main terminal 5 excavations

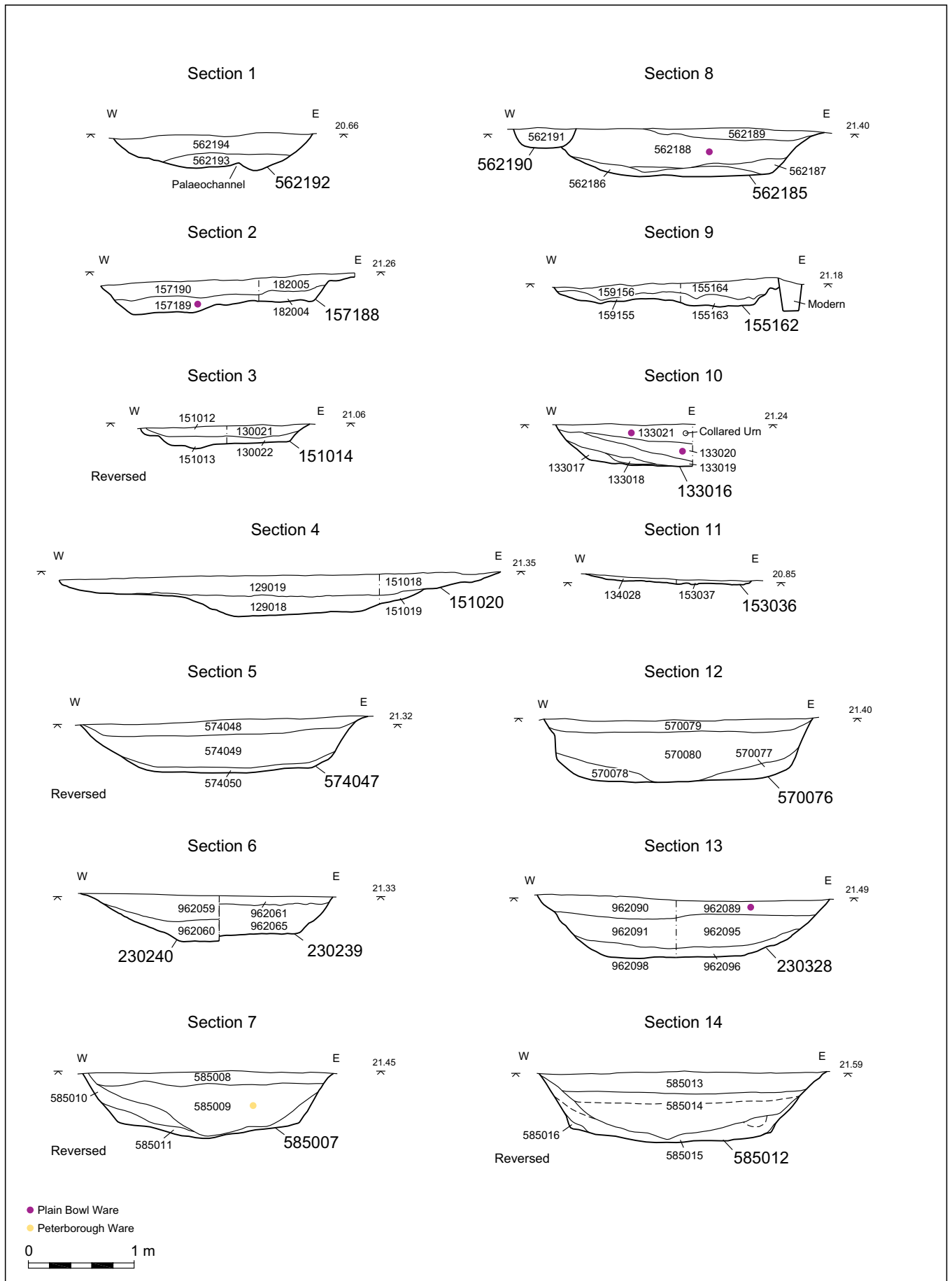
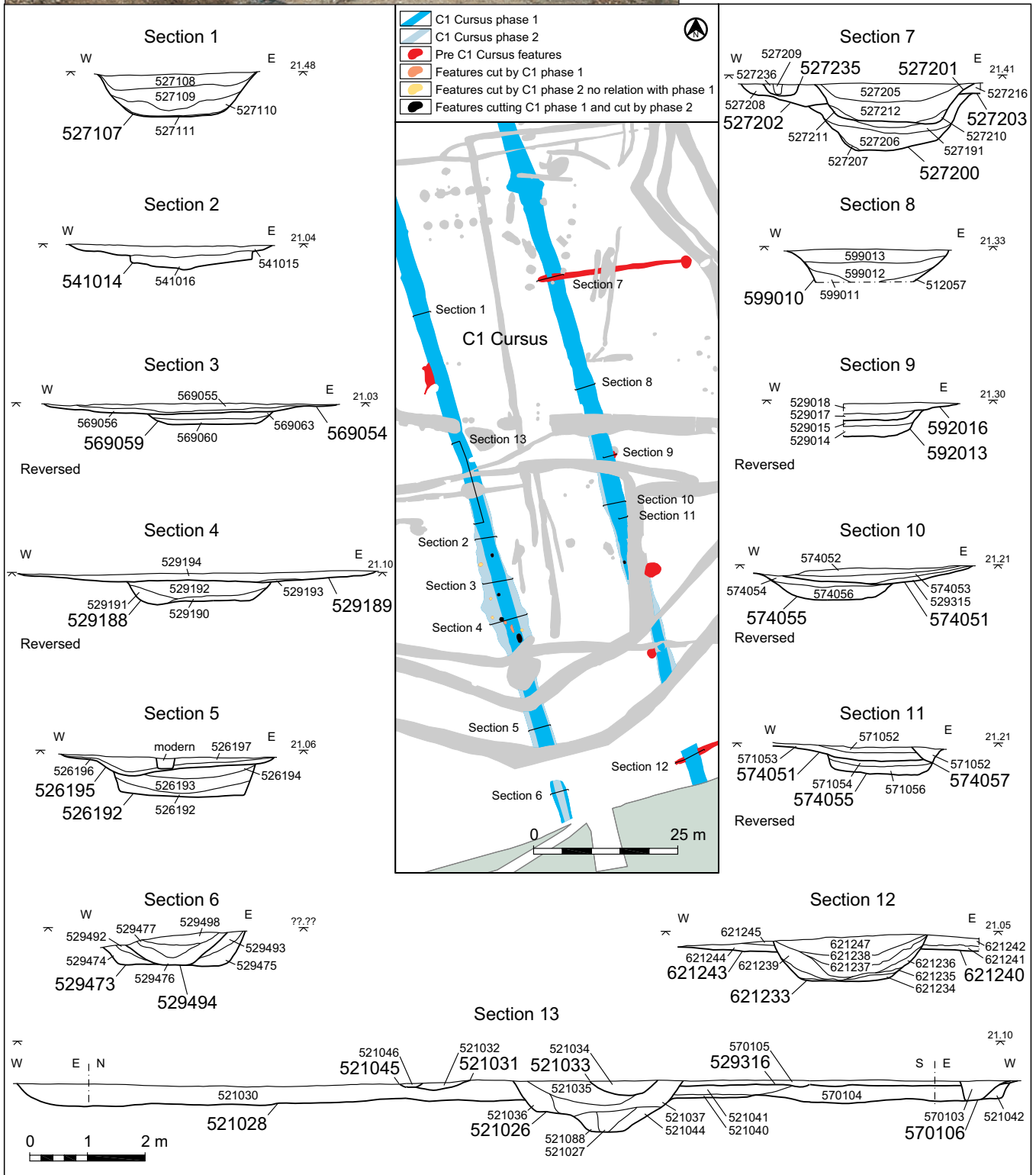


Figure 2.32: C1 Stanwell Cursus sections north of Area 49



Left  
Plate 2.16: C1 Stanwell Cursus ditch  
under excavation

Below  
Figure 2.33: C1 Stanwell Cursus  
and sections in Area 49



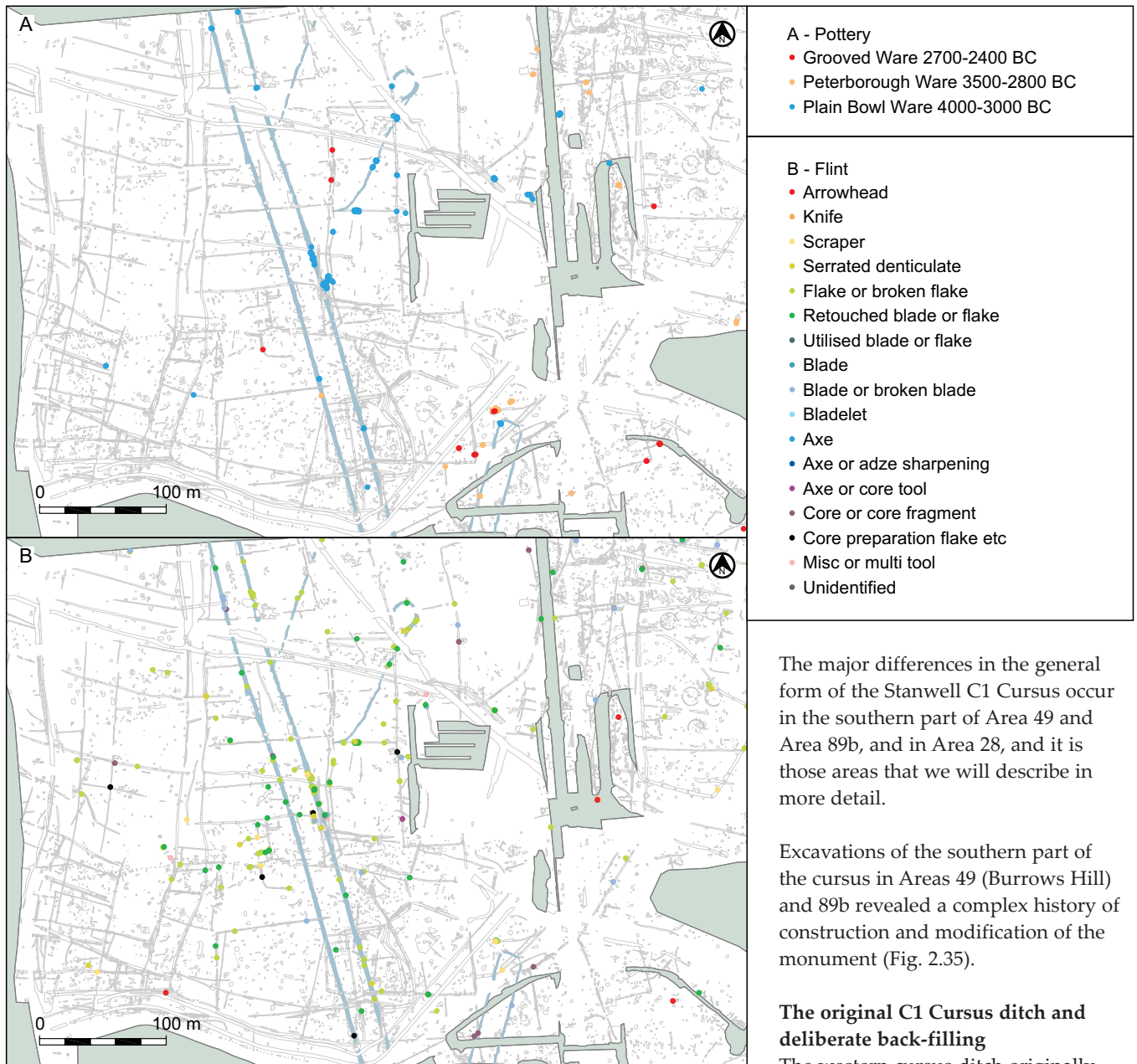


Figure 2.34: Neolithic flint and pottery distribution in and around the junctions of the C1 and C2 cursus monuments

predates the cursus in this area, and the distribution of worked flint in the fills of the C1 Cursus are also significant at this point (Fig. 2.34):

*The burnt unworked flint shows a remarkably similar distribution to the struck flint (its distribution by weight is virtually identical). In both cases, a significant concentration of material is associated with the junction of the C1 and C2 cursus monuments, directly in line with the HE1 ring ditch. This location must have held a particular attraction in the Neolithic period, perhaps on account of its position at the convergence of the two cursus monuments and within sight of the HE1 ring ditch.*

*Various activities, which seem to have involved tool use as well the burning of flint nodules, were repeatedly performed at this location, possibly over many years. It seems likely that these tasks were, in most cases, directly related to the use of the monument. The deposition of some of the more unusual pieces (eg polished flakes, knives and arrowheads) may have been governed by certain principles bound up with the ritual function of the site. Other activities, such as flint knapping and the deposition of knapping waste, may have been more incidental to its primary use as a monument.*

*(Cramp and Leivers, CD Section 4)*

The major differences in the general form of the Stanwell C1 Cursus occur in the southern part of Area 49 and Area 89b, and in Area 28, and it is those areas that we will describe in more detail.

Excavations of the southern part of the cursus in Areas 49 (Burrows Hill) and 89b revealed a complex history of construction and modification of the monument (Fig. 2.35).

#### **The original C1 Cursus ditch and deliberate back-filling**

The western cursus ditch originally consisted of a steep sided, 'U'-profiled cut (529311). The ditch varied from 1.25 m to 2.45 m wide and 0.2 m to 0.6 m deep. Most unusually for the C1 Cursus, this length of ditch was filled with very compact, dark stained, un-sorted gravel. This was interpreted as being deposited by deliberately back-filling the ditch, rather than natural silting. Small fragments of unidentifiable prehistoric pottery, a single worked flint, flint spalls and pieces of burnt flint were the only finds from these deposits. The ditch cut two post-holes (529196 and 529198), which have been described above. However, the upper fills of ditch 529311 were also cut by a number of postholes and a pit, which in turn were cut or sealed by the

second phase of cursus ditch, 529313. In addition, another three postholes (605005, 605009 and 605007) which had no stratigraphic relationship with the earliest phase of the ditch (529311) were also cut by the second phase ditch (529313). This re-cut of the cursus was much shallower and wider and filled with a brickearth- rich deposit.

The backfilling and recutting ditch sequence did not extend further north than Middle Bronze Age pit 521026 which unfortunately destroyed the start of the two-phase sequence. The sequence extended southwards for 44 m until destroyed by the southernmost of the two post-medieval trackway ditches and modern intrusions. However, the sequence changed four metres to the south in area 89b. Here, there are two recognisable ditch sequences. The first phase (529473) is now wider and shallower, but this is cut by a steeper sided, narrower second phase (529494). The evidence for this extends for a total of six metres before disappearing beyond the excavated area.

The eastern cursus ditch contained a similar sequence to the western ditch. The original deeper ditch (529310) was backfilled and replaced by a shallower ditch (529312). Finds from the earlier phase consisted of three struck flints (including a backed knife) and some unidentified mineralised animal bone. As with the western ditch, a posthole (598027) cut the deliberate back fill of 529310 but was in turn cut by the upper ditch, 529312.

The start of the two-phase sequence is obscured in the north by the Bronze Age and medieval enclosure ditch complex, but it does not extend north of these features. The sequence then runs for 43 m southwards until it is also destroyed by a post-medieval trackway ditch. Ten metres further south, in Area 89b, the eastern ditch reverted to a single phase (621233), although the section is somewhat ambiguous in this respect.

The different history of cursus deposits recorded in Area 89b may represent the start of a separate sequence of

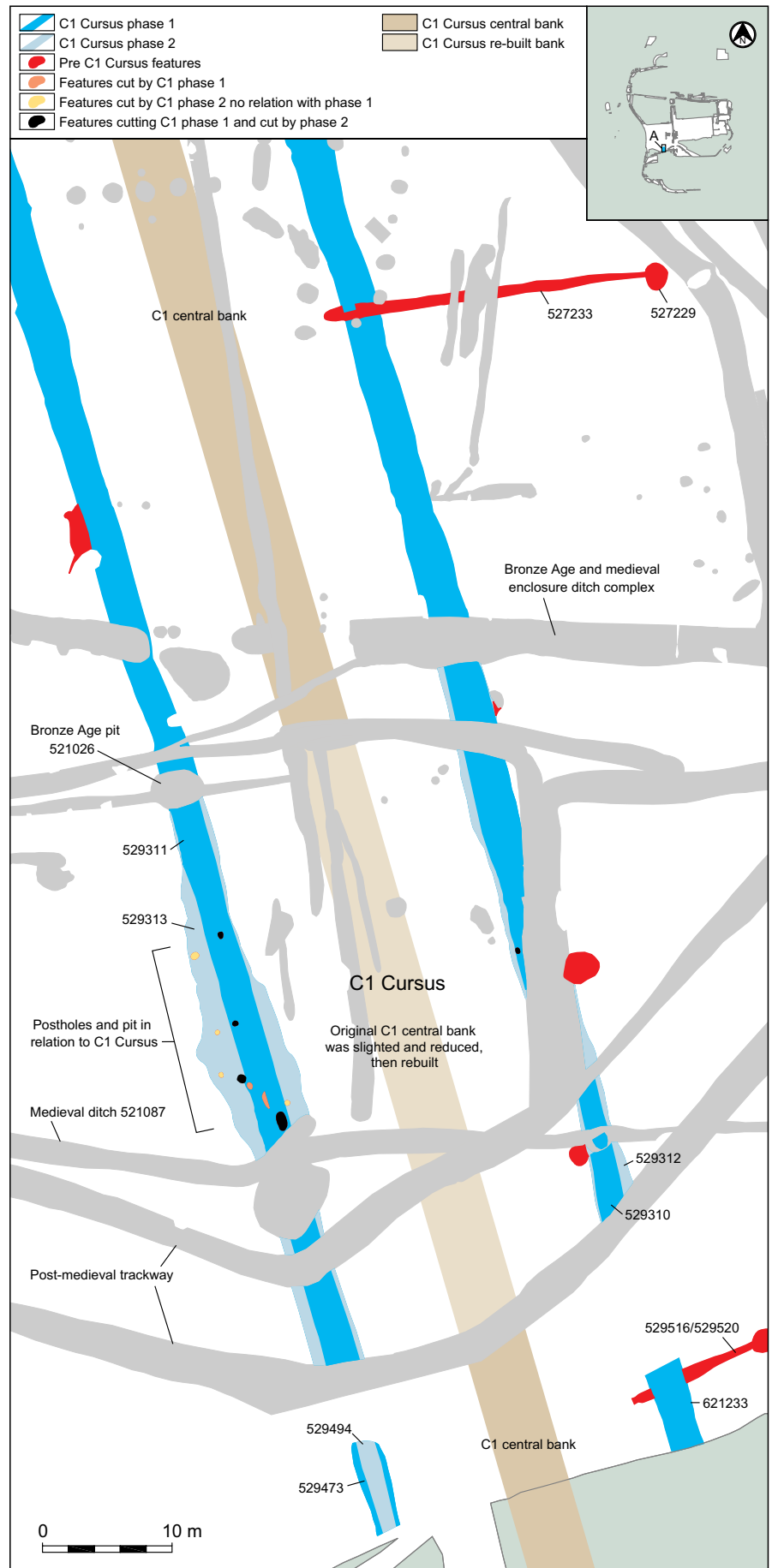


Figure 2.35: C1 Stanwell Cursus modifications in Area 49



cursus construction and modification, perhaps more influenced by the junction of the C1 and the C3 monuments further to the south-east and thus unconnected with the backfilling and recutting in Area 49.

Although it would appear that the C1 Cursus in the southern part of Area 49 was constructed in a similar fashion to elsewhere along its course, it is clear that, after an unknown period of time, but still within the currency of Plain Bowl pottery (ie between 3600 and 3300 BC), the ditches were deliberately back-filled, presumably with material from the central mound (see below for discussion of construction date for the monument). The slighting and reduction of the central mound was perhaps the major impact on the Stanwell Cursus and the focus of the intent, rather than the back-filling of the ditches.

Why this should be done is unknown, but it is highly likely to have been connected with the fact that this particular location was the scene of relatively substantial activity which predated the cursus and which has been described previously.

The presence of postholes and a small pit cutting the upper levels of the backfill in the ditches attests to continued activity at the location after the modification to the C1 monument, and reinforces the importance of the location. It seems likely that the pit and postholes were associated with activity which stemmed from the modifications to the cursus.

#### **The second phase of cursus ditches: re-establishing the monument**

The second phase ditches (529313 and 529312) are generally wider than the Phase I C1 ditches, as if to deliberately obliterate all trace of their predecessors (Fig. 2.35). They are also shallower, which suggests that less spoil was required to add to any relict mound from the original C1 monument.

Whatever the effects of the cutting of the second phase ditch, it would appear that the final form of the central cursus mound in this area was

noticeably different (lower?) than that to the north and possibly the south. This would explain the arrangement of a series of the Bronze Age and medieval ditches and gullies which seem to be orientated on the northern limits of the backfilling sequence in both the western and eastern C1 ditches, and it is surely no coincidence that Bronze Age pit 521026 lies exactly at the start of the two-phase sequence in the western C1 ditch.

The features cutting into the upper levels of the backfilled first phase ditches suggest that at least some time passed before the second phase ditches were excavated, but the time span is unknown. Two barbed and tanged arrowheads (one damaged, the other pristine) and a small sherd of grog tempered pottery (possibly Beaker or Collared Urn) from the upper fill of the western and eastern Phase II ditches (529313 and 529312) suggest that the Phase II remodelling took place at the end of the 3rd millennium or early in the 2nd millennium BC. This is approximately 1000 years after the construction of the monument. Unfortunately, the presence of the barbed and tanged arrowheads cannot be used with great confidence to date this event, since the same fills also contained a sherd of Deverel-Rimbury Middle Bronze Age pottery and 6 sherds of Romano-British pottery. It has been noted that elsewhere along the cursus pottery and artefacts of all periods from the Bronze Age to the medieval period have been recovered from the upper fills of the monument. All we can be certain of is that the Phase II profile pre-dates Middle Bronze Age pit 521026, which contained large sherds of Deverel-Rimbury pottery.

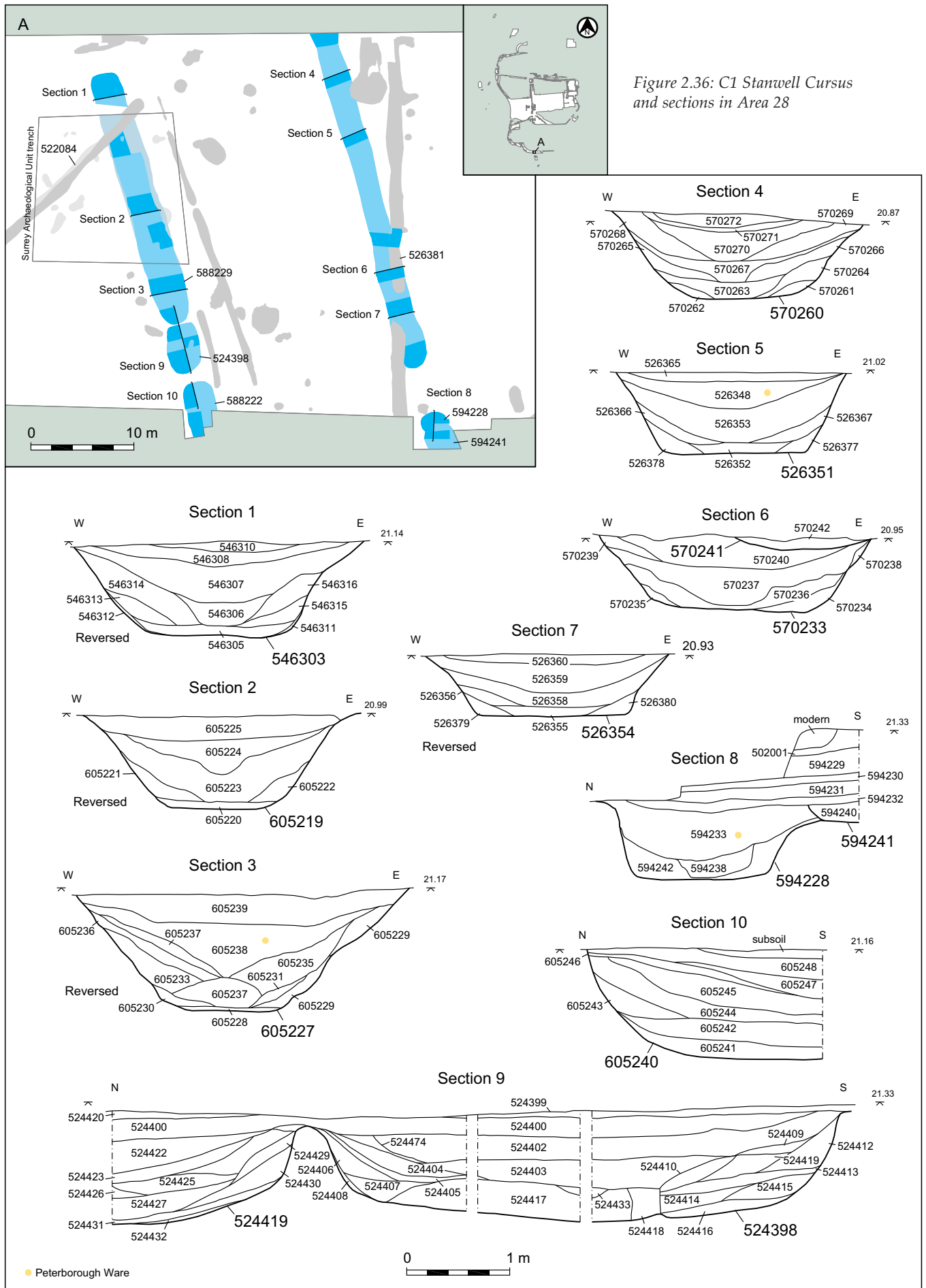
#### *Area 28: Modification and addition?*

The Area 28 excavation is the furthest south-easterly point of the Terminal 5 excavations of the C1 Stanwell Cursus (Fig. 2.36). Area 28 was located 620 m south-east of the main Terminal 5 excavation area, with the intervening land occupied by runways, taxiways and Airport infrastructure. Area 28 also coincides with a trench (Area 2)

excavated by the Surrey Archaeological Unit as part of the Park Road Stanwell excavations in the early 1980s (O'Connell 1990). Since then, the area has been incorporated within the Airport boundary. Area 2 of the Park Road excavations explored the intersection of the western cursus ditch (588229) and a diagonal (presumed Bronze Age) ditch (522084), and this relationship was also explored during the Terminal 5 excavations. A comparison of the two adjacent sections through the cursus ditch from the Park Road excavation (O'Connell 1990, fig. 16, section HZ) and this volume (Fig. 2.36, Section 1) show a reassuring similarity. A comparison of the sections also confirms the truncation model which shows that 0.75 m of topsoil and subsoil has been lost since 1943.

The C1 Cursus in Area 28 is unusual in several ways. Firstly, there is clear evidence for discontinuous lengths of segmented ditch, rather than the continuous ditches seen elsewhere. Secondly, the western ditch appeared to be noticeably deeper on excavation (though see below) than the eastern ditch, again a phenomena which does not occur elsewhere. Thirdly, the upper fills of the ditches contained a significant amount of Peterborough Ware pottery, which broadly dates to between 3400 BC and 2500 BC.

The exposed section of the western ditch (588229) commences 3.8 m south of the northern limit of the excavated area, leaving an entrance or causeway across the western ditch to the north. The first segment of the ditch is 25.3 m long, varies from 2.5 m to 3.3 m wide and is 0.9 to 1.2 m deep, with an eroded 'U' profile. There is a possible earlier cut recorded in one intervention although this is far from convincing. The fill sequence is generally more complex than observed further north, with more stony layers in the base of the ditch, but all are attributable to natural silting processes. Barely 0.2 m beyond the southern terminus, the line of the ditch is continued by a large sub-rectangular pit (524398) measuring 4.6 m in length by 3.16 m wide and 1.2 m deep (Fig. 2.36, Section 9). The only stratigraphic relationship between the



ditch and the pit is the apparent continuity of the very uppermost fills between the two features.

Lying 1.15 m further south-east, feature 588222 appears to mark the continuation of the cursus ditch as it disappears beneath the southern limit of the area of excavation. This segment of the ditch is 3 m wide and 1.1 m deep (Fig. 2.36, Section 10).

The eastern ditch (526381) was located 21.5 m from the western ditch. It extended south-eastwards from the northern limit of the excavated area for 33.56 m before terminating. The ditch was 2–2.45 m wide and varied from 0.6 m to 0.8 m deep, with an eroded ‘U’ profile. The ditch fills all formed through natural silting, and there was no evidence for the presence of an adjacent bank in either the eastern or western ditches. Located 4.7 m from the terminus of ditch 526381 was a circular pit (594228; Fig. 2.36, Section 8), which was 2.44 m in diameter and 0.8 m deep.

Both western and eastern ditches seem to have been constructed by linking together elongated pits, rather than the much more elongated pits or true ditches recorded in the excavations on the main Terminal 5 site.

The finds assemblages from the cursus and associated pits are also unusual in this area. For example, pit 594228 on the line of the eastern ditch contained a relatively rich finds assemblage. The pottery consisted of 18 (25 g) undiagnostic prehistoric sherds and eight sherds (35 g) of Peterborough (Mortlake) Ware including,

*... one rim, three body, two shoulder sherds in coarse flint-tempered fabric FL21, all with whipped cord maggots (the rim also has an incised line along the top and other incised impressions.*

*(Leivers et al., CD Section 1)*

The pottery was located in the upper fills (especially 594233) of the pit. A substantial amount of flintwork was also recovered throughout the fills of pit 594228.

*An assemblage of 98 struck flints and 146 pieces (1238 g) of burnt unworked flint was recovered from three deposits in pit 594228. Most of the material (71 pieces) came from the upper fill (594233) and was associated with sherds of Mortlake Ware. The flintwork is in an exceptionally fresh condition, suggesting minimal post-depositional disturbance, and is technologically consistent with the mid Neolithic date suggested by the pottery.*

*The assemblage is largely composed of unretouched flakes (64 pieces), most of which have been struck using hard-hammer percussion. Occasional rough platform dressing was noted. The majority of removals are trimming flakes, several of which are rather angular and irregular in form. Four single platform flake cores (weighing between 35 g and 513 g) and three partially worked nodules (between 24 g and 62 g) were recovered, suggesting the deposition of knapping waste. Retouched tools include four retouched flakes, one scraper and one carefully struck serrated blade. Several unretouched edges were also utilised.*

*A knapping refit was found between three flakes from deposit 594238 during the assessment; later analysis identified a few small groups of related flakes but only one additional refit between two flakes, suggesting that very small quantities of flintwork were deposited from any one core. The general impression of the assemblage is one of a combination of utilised and retouched pieces with the discarded, partial remains of several knapping events.*

*(Cramp and Leivers, CD Section 4)*

We can thus conclude with certainty that the excavation and filling of pit 594228 was associated with Peterborough Ware, not the Plain Bowl pottery associated with the construction of the C1 Cursus. The southern edge of pit 594228 was cut by another feature, 594241. Unfortunately very little of this could be excavated as it was adjacent to the southern boundary of the site. The excavators concluded that it was a length of ditch, probably the continuation of the eastern C1 Cursus ditch, but it could have been another pit. Feature 594241 contained one sherd of Peterborough

Ware and three flint flakes, one of which was originally part of a polished axe. Since Feature 594241 cut pit 594228, it is possible that these artefacts originated in the earlier feature.

Features 594228 and 594241 are significant in that they suggest that modification and possibly construction of this part of the C1 Cursus was associated with Peterborough Ware pottery, rather than Plain Bowl. As the use of Peterborough Ware has been dated elsewhere to the period 3400 to 2500 BC, and Plain Bowl to the period 3600 to 3300 BC, there is a possibility that this section of the C1 Cursus was constructed at a later date than that further north. However, note there is an overlap, and hence contemporaneity of the period of use of both types of pottery at 3400 BC. A handful of Peterborough Ware sherds from the C1 Cursus ditch in Area 28 seem to support this possibility. Furthermore, Mortlake and Ebbsfleet Ware sherds were recovered from the upper silts of the cursus ditches in Surrey County Council excavations of the 1980s, approximately 75 m to the south-east of Area 28 (Cotton in O’Connell 1990, 28). However, as Cotton observed, the presence of Peterborough Ware in the upper silts only provide a *terminus ante quem* for the in-filling of the ditches in this area of the C1 Cursus. Occasional sherds of Peterborough Ware have been recovered from the C1 Cursus further north in the Terminal 5 excavations, and the greater degree of truncation within the main site may have resulted in Peterborough Ware being under represented. Cotton also noted the presence of undiagnostic sherds in fabrics which...

*...are best accommodated within the local first millennium BC pottery sequence. Notwithstanding the fact that some of the sherds were recovered from positions low down in the ditch fills... (Cotton in O’Connell 1990, 28).*

Given the problems in the differentiation of Neolithic Plain Bowl pottery from Late Bronze Age post-Deverel-Rimbury pottery, it highly likely that these un-diagnostic sherds are the former, not the latter. This would be in

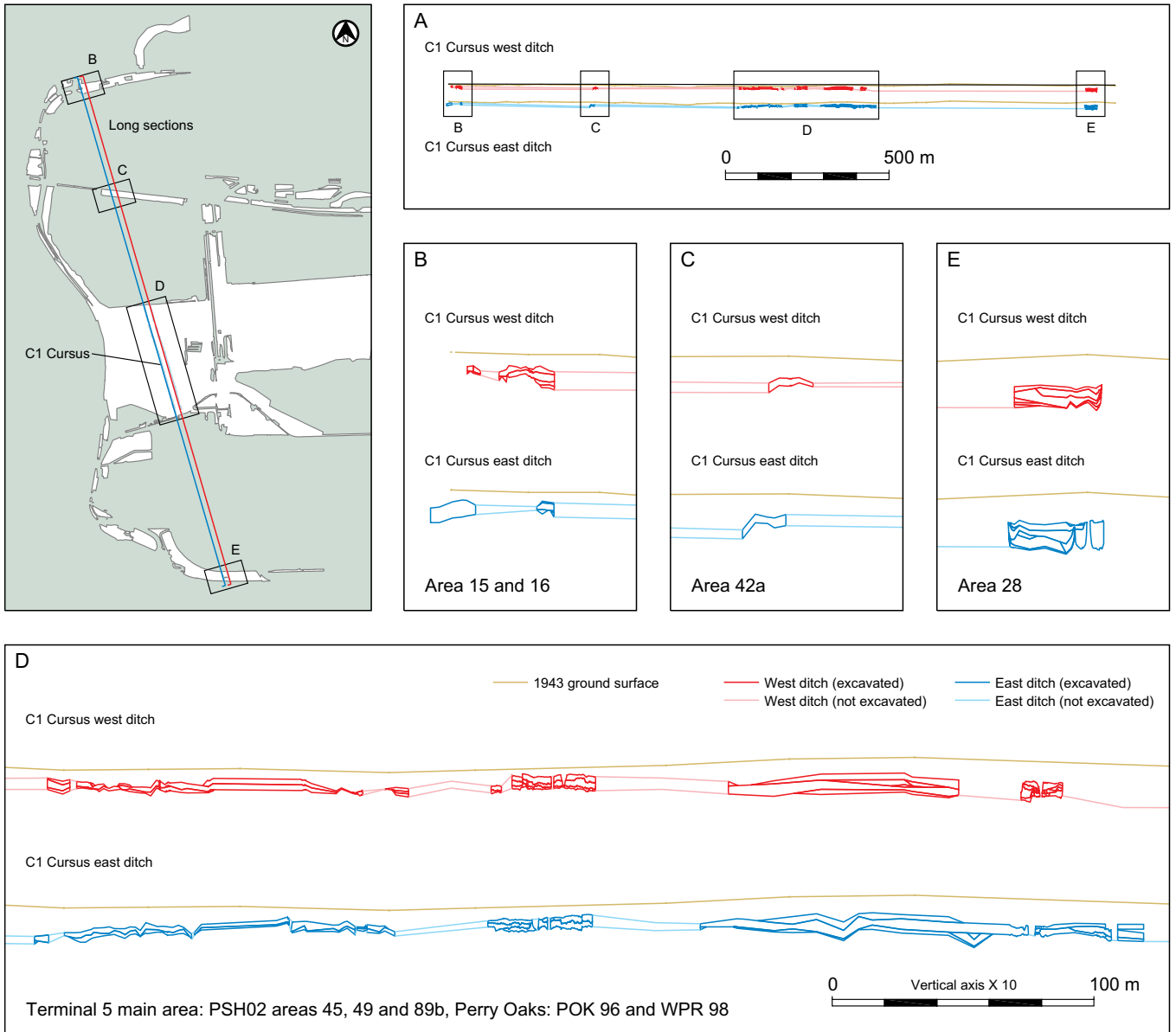


Figure 2.37: C1 Stanwell Cursus long sections and 1943 ground surface with vertical scale exaggerated by 10 times

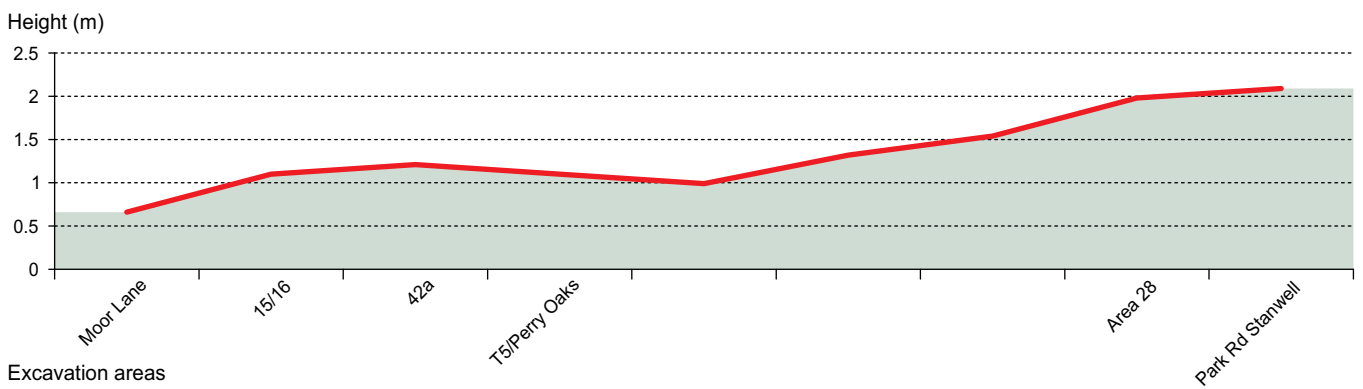


Figure 2.38: Projected Height of the C1 Stanwell Cursus bank

accordance with the recovery of Plain Bowl Ware from the C1 Cursus in the main Terminal 5 excavations further north. However, if feature 594241 does represent part of the cursus ditch, then it is stratigraphically later than pit 549228 which contained Peterborough Ware. Nonetheless, both the pit and ditch could represent a localised modification (such as blocking a causeway) to the existing cursus rather than a new southern extension.

In conclusion, the C1 Cursus sequence in Area 28 may not be out of accord with that elsewhere, namely that the monument was constructed during the use of Plain Bowl Pottery. It subsequently underwent modifications and these, together with activity associated with the middle fills of the cursus (see below), appear to have been linked with the use of Peterborough Ware pottery.

One further unusual feature of the C1 Cursus in Area 28 is the apparent discrepancy in depth between the western and eastern ditches. During excavation, it was apparent that the western ditch was significantly deeper than the shallower eastern ditch (see sections on Fig. 2.36). However, comparison of the reduced Ordnance Datum heights along the bases of both ditches reveals that the western ditch varied from being 6 cms shallower to 20 cms deeper than the eastern ditch. Although the western ditch is on average deeper, the difference is actually not as great as thought during excavation. This can be attributed to the microtopography of Area 28. A low gravel ridge runs north-south just inside the eastern edge of the western ditch. This ridge is quite pronounced but falls away rapidly so that the eastern third of the central area of the cursus is relatively lower, thus making the eastern ditch appear much shallower. The possibility that the gravel ridge represented the area protected by the original cursus bank was discussed on site, but its asymmetric position between the two cursus ditches would seem to preclude this possibility.

### *Park Road Stanwell*

The Park Road Stanwell excavations were undertaken in several phases between 1979 and 1985 by the archaeological section of Surrey County Council (O'Connell 1990). A number of areas were examined, but with regards the Stanwell Cursus, the excavation is important in that it conclusively demonstrated that it was a Neolithic monument and not, as previously inferred from aerial photographs, a Roman road. A small trench (Area 2) detected the western cursus ditch close to the northern edge of the site, and as described above, this excavation was detected within Terminal 5 Area 28. The largest excavated area (O'Connell 1990, fig. 3: 1b, 7 and 8;) (located approximately 54 m to the south-east of Terminal 5 Area 28) revealed an approximately 90 m length of the cursus. A tree-throw was recorded as being cut by the cursus ditches, which were 21.6 m apart (O'Connell 1990, fig. 10). The ditches were between 3.3 and 3.6 m wide, and 1.05 to 1.18 m deep when measured from the stripped surface. However, when measured from the top of the existing ground surface, the ditches were up to 1.8 m deep (O'Connell 1990, fig. 16, JB and JC). Abraded Peterborough Ware was recovered from the upper ditch fills, with probable Plain Bowl Ware sherds from lower in the sequences (see above). Approximately 120 m further south-east, two small trenches (Areas 12 and 13) also detected short lengths of the cursus ditches, approximately 20.8 m apart. Like Terminal 5 Area 28, there was a break (3.5 m long) in the western ditch.

### *What did the C1 Cursus look like?*

Excavations at Perry Oaks in 1996 and 1999 confirmed that the Stanwell Cursus consisted of two parallel ditches between 20.5 and 22 m apart, the spoil from which was used to construct a single central bank (Framework Archaeology 2006, 54). The width and depth of the ditches will be explored in more detail below, but on excavation they averaged *c* 2.6 m wide and between 0.2 m and 0.5 m deep. The

evidence for a central bank takes two forms. Firstly, it is clear that the Middle Bronze Age field system ditches which cross the cursus become shallower and narrower as they cross the central part of the monument. In some places they actually stop just inside the cursus ditches. Perhaps the best example is the Middle Bronze Age ditch 962363, which has a distinctive hourglass plan as it crosses the central cursus area (see Framework Archaeology 2006, fig. 2.9). Sections across these 2nd millennium BC ditches confirm that they become much shallower between the two cursus ditches, as they were dug across an already decayed central bank. The sections excavated across these ditches suggest that by the middle of the 2nd millennium BC the cursus bank was *c* 13 m wide and at least *c* 0.23 m high.

The second piece of evidence for a central cursus bank comes from the Air Ministry survey of Heathrow undertaken in 1943. Whilst the surveyors did not notice a remnant bank at the time, the digitisation and processing of these survey data for this project reveals the presence of just such a feature coincident with the cursus crop marks, running from Stanwell and terminating just to the south of Burrows Hill, immediately south of Perry Oaks. At the time of the 1943 survey, the broad remnant bank was *c* 0.2 m high and *c* 30 m wide, and it is this that led originally to the identification of the cursus as a Roman road from the aerial photographs (Framework Archaeology 2006, 49).

It was calculated in Volume 1 that when originally constructed, the central bank would have been 5 m wide at the base, 1.2 m high and 2 m wide at the top, although this would have varied from place to place (Framework Archaeology 2006, 56). The additional data from the Terminal 5 excavations together with data from the excavations at Moor Lane and Park Road Stanwell (O'Connell 1990) suggest a clear trend towards the ditches being shallower at the north of the monument and deeper towards the south.

Figure 2.37 shows the longitudinal sections down the western and eastern



Plate 2.17: Reconstruction of the C1 Stanwell Cursus

cursus ditches and the level of the 1943 ground surface. This model was used to measure the depth from the base of the ditches to the top of the 1943 land surface, which we have assumed to equate to that in prehistory. We have also measured the depth of the ditches from their base to the ground surface where it was recorded in sections published by O'Connell (1990, fig. 16). The approximate depths of the Perry Oaks ditches from north to south have already been provided in *Volume 1* (see Framework Archaeology 2006, table

2.9), along with a corresponding indication of the height of the bank, allowing for an expansion factor of 1.1.

Figure 2.38 shows the height of the bank as extrapolated from the depth of the ditches from Moor Lane in the north to Park Road Stanwell in the south. The slight decrease in height along the 'kink' in the Perry Oaks excavations is quite apparent. Caution should be exercised with this interpretation, since the degree of truncation that may have occurred at Moor Lane

is unknown (though Cotton observed no obvious signs of disturbance (O'Connell 1990, 32). Furthermore, the Perry Oaks sludge works had already disturbed the cursus prior to the 1943 survey, so the data may not be strictly comparable. However, if correct, there could be two reasons for the increasing height of the bank toward the south. Firstly, it could be that the monument moves progressively eastwards, away from the edge of the Colne floodplain as it moves south. Thus, viewed from the floodplain to the west, the central

mound would have had to increase in height to remain visible. In contrast, the northern section of the monument runs onto the Colne floodplain, where the bank could be lower but still viewed from further west.

Volume 1 contained photographs of the reconstructed C1 Cursus during the excavations at Perry Oaks (Framework Archaeology 2006, 56–7). During the Terminal 5 excavations, the opportunity was again taken to produce another reconstruction of the cursus (Plate 2.17) in which the ditches are deeper and the bank higher, and gives an indication of the form of the cursus as it may have been towards its southern part in Area 49.

If the height of the bank varied from north to south, then so did the appearance. For example, we have seen that in the north, in Areas 15 and 16, the bank and the eastern ditch may have been coated and lined in white tufa-rich clay, which would have made the monument very conspicuous. In the southern part of Area 49, however,

the bank was subsequently demolished and then the ditches recut, whilst in Area 28, there appears to have been localised modification associated with Peterborough Ware pottery.

The sequence of repeated re-cutting and/or extension that characterises the C3 Cursus is conspicuously absent from the C1 ditch profiles. Even the sequence described for the southern part of Area 49 is totally different to that for the C3 Cursus. Nowhere along the length of the C1 Cursus has a clear ‘join’ between two lengths of cursus ditch been recorded, and we are left with the impression that the original construction of the monument took place (as set out above) as a single project within a comparatively short time scale.

### *When was the C1 Stanwell cursus built?*

Cursus monuments have traditionally proved very difficult to date accurately, due to the general paucity of artefactual material in their ditches, although it

has now been concluded that they were built between 3640–3380 cal BC and 3260–2920 cal BC (Barclay and Bayliss 1999, 24). Recently, the Greater Stonehenge Cursus has been re-dated to 3630 to 3370 cal BC (Thomas *et al.* 2008, 49). However, we have already made the point that the Stanwell Cursus belongs to a class of monument with radically different architecture to traditional cursus, and therefore chronological parallels with these monuments must be viewed with caution. None of the samples of organic material from the C1 Stanwell Cursus submitted for radiocarbon determination produced a result (see above), and thus we are reliant on the relative chronology provided by pottery and flintwork from the ditch fills.

Table 2.13 quantifies the Neolithic to Early Bronze Age pottery assemblage by stratigraphic order within the C1 Cursus ditches (we can confidently discount later pottery as being intrusive). Data from the second phase of cursus ditch cutting on Area 49 has been excluded. It is apparent that in

Site code/area	Intervention	SG Number	Stratigraphy	Ditch (E or W)	Fabric Type	Ceramic Tradition	No. of Objects	Weight (g)
WPR98	133016	134033	Upper	E	GR1	EBA - Grog tempered	2	2
PSH02 / 15-16	559495	617043	Upper	E	GR2	Grooved Ware	1	23
PSH02 / 28	526351	526391	Upper	E	FL19	Peterborough - Mortlake Ware	1	7
PSH02 / 28	605240	605247	Upper	W	FL19	Peterborough - Mortlake Ware	2	13
WPR98	133016	134033	Upper	E	FL4	Plain Bowl Ware	1	2
POK96	230326	230336	Upper	E	FL4	Plain Bowl Ware	1	1
POK96	230328	230336	Upper	E	FL4	Plain Bowl Ware	2	2
POK96	230329	230336	Upper	E	FL4	Plain Bowl Ware	2	5
<b>Upper Total</b>							<b>12</b>	<b>55</b>
PSH02 / 15-16	559519	617043	Middle	E	GR1	EBA - Grog tempered	1	7
PSH02 / 49	585007	529303	Middle	W	FL20	Peterborough - Mortlake Ware	1	14
PSH02 / 28	605227	588237	Middle	W	FL21	Peterborough - Mortlake Ware	1	7
WPR98	133016	134032	Middle	E	FL4	Plain Bowl Ware	1	5
POK96	230327	230335	Middle	E	FL4	Plain Bowl Ware	4	2
POK96	230329	230335	Middle	E	FL4	Plain Bowl Ware	4	8
PSH02 / 45	562185	524236	Middle	E	FL16	Plain Bowl Ware	1	6
<b>Middle Total</b>							<b>13</b>	<b>49</b>
PSH02 / 15-16	621100	621103	Lower	E	FL21	Peterborough - Mortlake Ware	1	3
WPR98	157188	128029	Lower	W	FL4	Plain Bowl Ware	2	25
POK96	229242	230334	Lower	E	FL4	Plain Bowl Ware	2	4
POK96	230333	230334	Lower	E	FL4	Plain Bowl Ware	2	7
PSH02 / 15-16	592181	617039	Lower	E	QU17	Plain Bowl Ware	1	42
<b>Lower Total</b>							<b>8</b>	<b>81</b>
<b>Grand Total</b>							<b>33</b>	<b>185</b>

Table 2.13: Neolithic to Early Bronze Age pottery stratified in the ditch fills of the C1 Stanwell Cursus

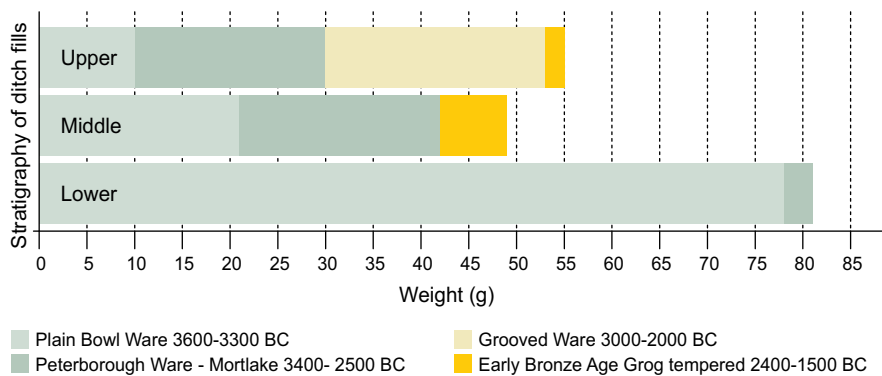


Figure 2.39: Weight of Neolithic to Early Bronze Age pottery stratified in the ditch fills of the C1 Stanwell Cursus

terms of numbers and weight, the assemblage is very small, and most was retrieved from the eastern ditch.

Figure 2.39 charts the data contained in Table 2.13. It is quite clear that Plain Bowl pottery is the dominant form in the lower fills, whilst the middle and upper fills see an increase in Peterborough Ware. The data from the Park Road Stanwell excavations has not been included due to the uncertainty over the identification of some of the assemblage (Cotton in O'Connell 1990, 28–9). However, if it is assumed that the 'other' sherds retrieved from the cursus are in fact Plain Bowl Ware, then the Park Road data does not materially alter Figure 2.39.

The data in Figure 2.39 would suggest that the cursus was constructed during the currency of Plain Bowl Ware sometime between 3600 and 3300 BC, possibly at a time when Plain Bowl and Peterborough Ware were in use, or when the latter had recently supplanted the former. The ditches appear to have accumulated silt through the 3rd millennium BC, so that by the early 2nd millennium BC, they had filled up. Several cursus appear to be associated with Peterborough Ware (eg Drayton North, Oxfordshire (Barclay *et al.* 2003), Springfield, Essex (Buckley *et al.* 2001, 128)). However, the Dorset Cursus produced sherds of Early Neolithic pottery from the basal primary fills, with larger quantities of Peterborough Ware from an adjacent 'occupation site' in the uppermost fills (Barrett *et al.* 1991, 46 and 71, fig. 2.13). This sequence is similar to that from the Stanwell C1 Cursus.

There is some corroboration of this from analysis of the flint assemblage, although the coarser chronology provided by lithics is generally less helpful:

*In general, the retouched tools were mainly confined to the middle and upper fills of the ditches; very few pieces were recovered from the basal fills. As might be expected, diagnostically Neolithic pieces (eg flakes from polished implements) were found in the lower fills; typically Bronze Age pieces, such as the backed knives, barbed-and-tanged arrowheads and denticulated scrapers, tended to come from the upper fills (the two barbed-and-tanged arrowheads come from rank 2 fills of the recut [entity 2886]; the other types from fills of the original cut [entity 727]). While this may provide some evidence of the chronological sequence, other technologically early pieces (such as the Mesolithic burin and axe-thinning flake) were scattered throughout the fills of entity 727 and argue for some redeposition.*

(Cramp and Leivers, CD Section 4)

With regards the sedimentary processes that led to the filling of the C1 Stanwell Cursus ditches, Bates (Framework Archaeology 2006, Volume 1, CD Section 14) makes the following observations:

- *The magnetic susceptibility determinations from the western ditch fills... perhaps indicates gradual, slow and continual accumulation of sediment.*
- *Infilling of the eastern ditch suggests that progressive infilling of the feature resulted from a winnowing out of the finer*

*elements of the bedrock, and their subsequent deposition as ditch fills, and a decrease in gravel content up-profile. Infilling of the central section of the eastern ditch (155165) suggests differing patterns of infilling dominated here.*

- *The peaks of values for both magnetic susceptibility and organic content within the eastern ditch suggest variation in the nature of patterns of sedimentation and the possibility that a phase of stability exists within the middle part of the profile (thus implying a period of ditch fill stability and cessation of infilling – this may be reflected in the age distribution of finds from the uppermost fills being considerably later than the assumed age for the early fills).*

### **How much effort was required to build the C1 Stanwell cursus?**

We have found little reason to alter the conclusions of the estimates expressed in Volume 1 (Framework Archaeology 2006, 57), and they are summarised thus.

We have made a case for the cursus to have been constructed as relatively short, connected lengths, possibly each having been excavated by a different team. The method used by Startin (1982; 1998) for the Abingdon causewayed enclosure and Cleaven Dyke Cursus has been followed. Startin assumed a rate of excavation of 0.35 cubic metre per person per hour. From personal experience of excavating the compacted gravel and brickearth deposits of the Perry Oaks area, a more likely rate would be c 0.25 cubic metre per person per hour. We can assume that for each ditch, the team consisted of one digger with antler picks and one shoveller using scapulae and baskets, who would also carry the spoil to the central bank. The palaeoenvironmental evidence suggests that trees and vegetation had been felled and cleared from the course of the cursus and assuming the course had already been set out with ropes, then two teams of two people working 10 hour days, six days a week, could complete the 150 m long 'kinked' section of the cursus in 16 to 18 weeks.



If we suppose that the C1 Cursus was built in similar 150 m long segments, then the whole 3.6 km could be built by 24 teams of two people per ditch (a total workforce of 96 using c 97,000 man hours) in 16–18 weeks. Of course, we have already noted how the ditches were deeper in some sections of the cursus and the bank would have been higher, but this calculation gives some idea of the effort required. It is apparent that the cursus could have been constructed by relatively few people, within a relatively short time scale. It is probable that the labour was spread over more than one year to accommodate other domestic activities, but as we have suggested, the regularity of the scheme would suggest that it would have taken a few years at most.

### ***What did the landscape look like when the cursus had been built?***

We have two pieces of evidence for the appearance of the landscape shortly after the construction of the cursus. The first is a pollen profile from pit 150011 which cuts the lower fills of the C1 Stanwell cursus, and has been described in detail in Volume 1 (Framework Archaeology 2006, 61–5). In summary,

*Pit 150011 shows that the Neolithic landscape supported mixed, deciduous woodland, dominated by oak and hazel in the vicinity of the site. However, some impact was being made on the wildwood. Because of the relatively short life of the feature, the picture presented here may represent a brief period, certainly within a single generation of oak, lime, and alder trees. There appear to have been relatively small areas of grasses and herbs, and the environs of the pit had moist soils. There seems to have been some arable agriculture being carried out locally and it is possible that cereals were being grown in the woodland glades, the so-called practice of 'forest farming' (Coles 1976; Göransson 1986; Edwards 1993). Unfortunately, we cannot be sure whether pit 150011 and therefore the C1 Stanwell Cursus were located within a local clearing, or at the edge of the transition from a wooded environment (perhaps on the floodplain) to a more open landscape on the terrace... .. There is little doubt then,*

*that interpretation of data relating to woodland cover in the Neolithic period is fraught with difficulty. The patchiness of the landscape and the essentially low sampling frequency mean that complexities of taphonomy cannot be easily resolved. But, in spite of the difficulties listed here, wherever arboreal pollen levels are very low indeed, the catchment must be very open... To get low arboreal pollen values, the woodland edge would have had to have been some (unknown) distance away from a feature, or the local trees would have had to have been very heavily exploited so that flowering was suppressed. In spite of the high arboreal pollen values, the Neolithic landscape around Pit 150011 might have been more open than the pollen diagram might suggest.*

*The problems associated with identifying the extent of woodland clearance from palynological data alone ensure that the local environment at Perry Oaks during construction and the life of the cursus remains unclear. The monument itself is testimony to the creation of open ground, and yet Pit 150011, which cut the cursus ditch, seems to indicate densely wooded conditions. However, as outlined above, this may be because higher pollen levels are often associated with freer dispersal facilitated by an open canopy.*

*(Wiltshire in Framework Archaeology 2006, 63–5)*

The Terminal 5 excavations have added one further piece of data from the mollusc analysis of samples from calcareous deposit 617147 in the eastern C1 Cursus ditch in Area 15.

*Molluscan preservation in all samples examined was very good with 765 individuals identified in sample 18264. The samples contained mixed assemblages of freshwater and terrestrial species. It is likely that the freshwater assemblage derives from the redeposited tufa and was dominated by *Valvata cristata*, *Valvata piscinalis* and to a lesser extent *Bithynia* sp. and various freshwater catholic species. It is very likely this tufa formed in-channel in clean fast flowing water.*

*A component of the terrestrial assemblage may have been living in the vegetation covering the bank or within the ditch itself.*

*The terrestrial assemblage was composed largely of four species, dry land open country species *Pupilla muscorum*, *Vallonia excentrica* and *Vallonia costata*, and the catholic species *Trichia hispida*, consistent with an environment of established dry, short turfed grassland. Shade-loving species were almost entirely absent apart from occasional zonitids and worn apical fragments of the robust shelled Clausiliidae that may well be residual, but perhaps related to a previously more enclosed environment at the site. Of significance is perhaps the consistent presence of *Truncatellina cylindrica* in the samples. This species, although rare today, was more abundant in the Neolithic and Bronze Ages following primary clearance, and is found in very dry, short calcareous grassland in sandy or stony ground (Kerney 1999, 89).*

*Since the molluscs from the ditch are likely to reflect very local conditions in the immediate vicinity, it is not possible to say with certainty how extensive the open area around the monument may have been. It is possible, if boundaries were maintained over a substantial period, for a wholly open-country fauna to exist within a 'corridor' providing access to the floodplain, perhaps within a more enclosed environment. One may speculate, however, similar open environments may have existed in the area from which the fauna could colonise. The construction of the monument itself may have provided a route.*

*There is some indication of variation within the deposit with an increase in the relative abundance of terrestrial species and a reduction in freshwater species up-profile. This may be related to a gradual process of infilling perhaps suggesting the deposit formed incrementally rather than as a single event. This is consistent with the deposit description which suggested the presence of faint bedding structures. Deposition may have occurred by the weathering and erosion of material from the bank and edges of the feature, or one may speculate, episodic activity around the monument, incorporating elements from the contemporary topsoil.*

*(Stafford, CD Section 18)*

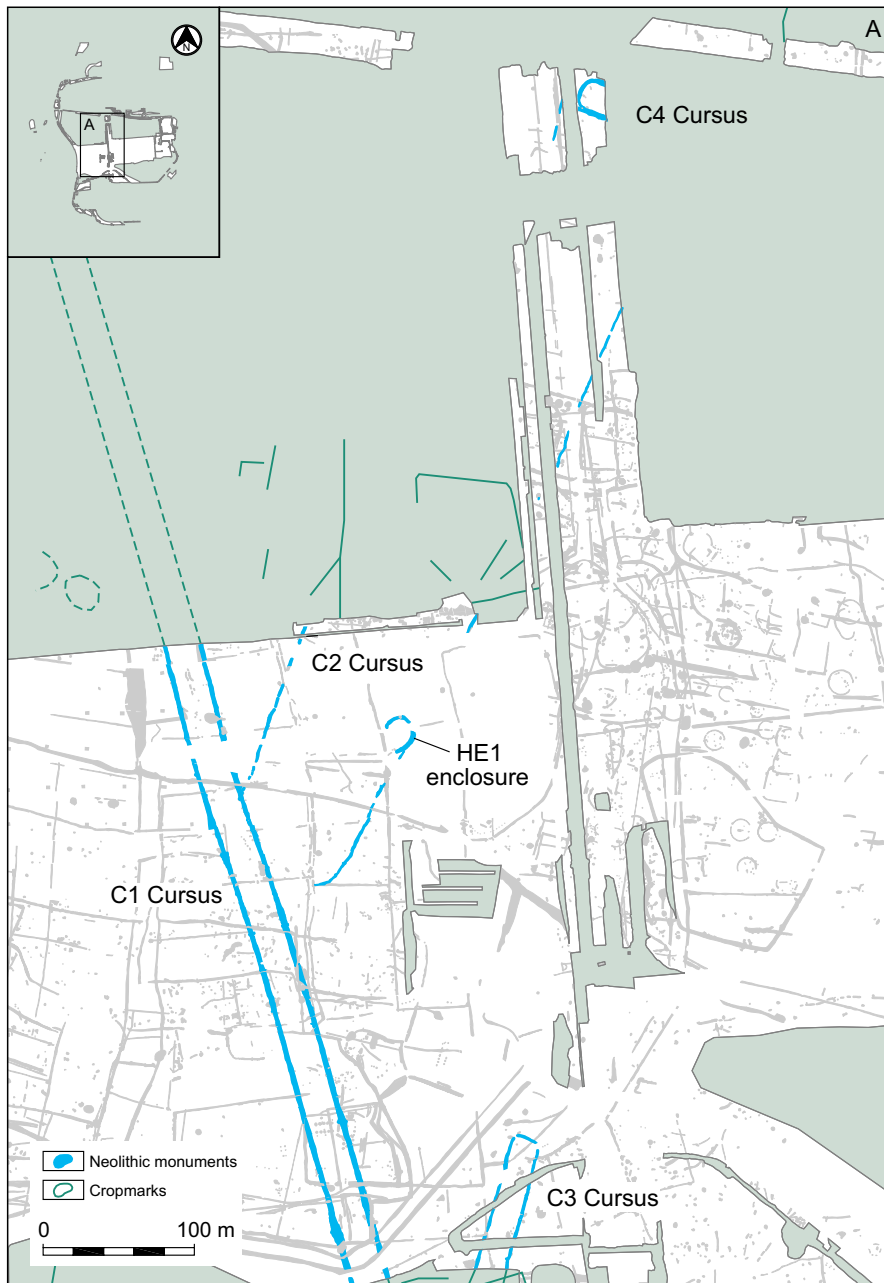


Figure 2.40: C2 Cursus in relation to crop marks

### C1 Cursus summary

We have described how certain locations along the route of the C1 Cursus had been places of human activity from the Late Mesolithic to just prior to the building of the monument in second half of the 4th millennium BC, during the currency of Plain Bowl Ware pottery (for example the Late Mesolithic midden site, the posthole complex, the 4th millennium settlement site and the C3/C5 Cursus which may have predated the C1 monument). We have also shown that the course of the C1 monument appears to have been deliberately adjusted to incorporate these locations within a

very narrow corridor through the landscape, a corridor that marked the boundary between the Colne floodplain and the higher terrace gravel of the Heathrow Terrace. Although the construction of the cursus overwrote those locations, it also served to unify the histories and meanings associated with them into a statement of unified planning, execution and grandeur.

We will now continue by examining the remaining two cursus monuments, before exploring in more detail some of the motivations that led to them being built and the consequences for the community of their construction.

### The C2 Cursus

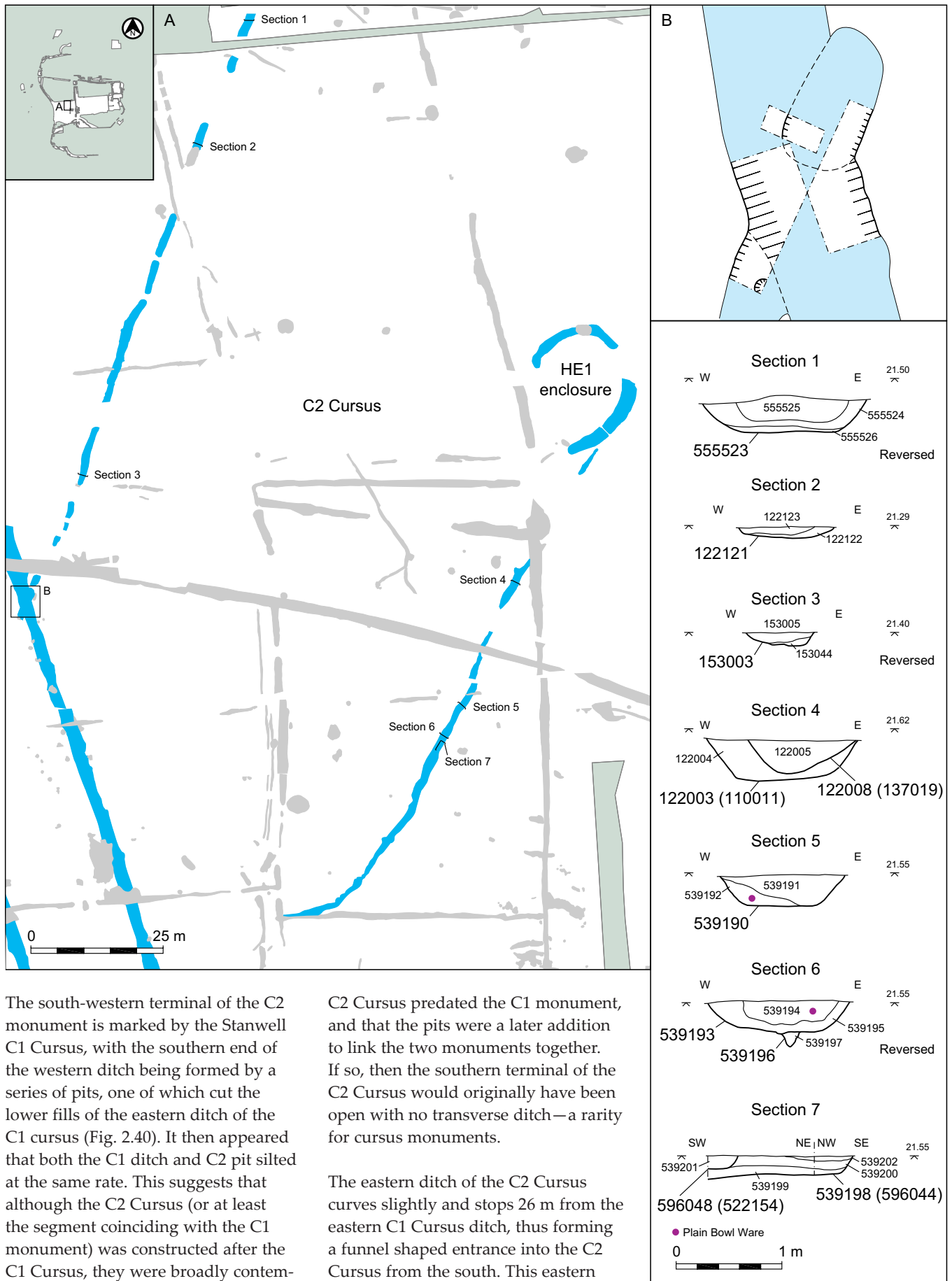
The southern section of the C2 Cursus was excavated in 1999 and described in Volume 1 (Framework Archaeology 2006, 69–72). The Terminal 5 excavations have added a little more evidence for dating the monument to the latter half of the 4th millennium BC and confirmed that the cursus extended further to the north-east, where there is slender evidence to suggest that the terminus was embellished by the construction of the C4 Cursus (Fig. 2.40).

#### Form and architecture

The course of the C2 Cursus is cut by many later archaeological features, and much has been lost due to modern destruction caused the Duke of Northumberland's and Longford Rivers (see Chapter 1, Fig. 1.1). The construction and operation of the Perry Oaks sludge works has also taken a severe toll on this monument, and it is difficult to be certain of the course, form and extent of much of the C2 Cursus.

As with the C1 and C3 cursus, there is evidence of the woodland clearance that must have preceded the construction of the C2 monument, in the form of tree-throws 650080 and 648041 (Fig. 2.42, Sections 10 and 14). In addition, there was also a single posthole (539196) which was cut by the eastern ditch of the C2 Cursus, demonstrating some form of activity at this location prior to construction of the monument (Fig. 2.41, Section 6).

The C2 Cursus is composed of two widely spaced, roughly parallel, discontinuous ditches orientated south-west to north-east. The ditches, which vary from 80 to 90 m apart, are much more widely spaced than those of the other three cursus monuments at Terminal 5. Figure 2.40 shows that the western and eastern ditches are not parallel but gradually diverging. For example, at their southern end, the ditches are 82 m apart, whilst 94 m to the north-east, near the HE1 Enclosure, they are 88 m apart. However there is some evidence that the ditches re-converge nearer their possible north-eastern terminal.



The south-western terminal of the C2 monument is marked by the Stanwell C1 Cursus, with the southern end of the western ditch being formed by a series of pits, one of which cut the lower fills of the eastern ditch of the C1 cursus (Fig. 2.40). It then appeared that both the C1 ditch and C2 pit silted at the same rate. This suggests that although the C2 Cursus (or at least the segment coinciding with the C1 monument) was constructed after the C1 Cursus, they were broadly contemporary (Framework Archaeology 2006, 71-2). However, it is possible that the

C2 Cursus predated the C1 monument, and that the pits were a later addition to link the two monuments together. If so, then the southern terminal of the C2 Cursus would originally have been open with no transverse ditch—a rarity for cursus monuments.

The eastern ditch of the C2 Cursus curves slightly and stops 26 m from the eastern C1 Cursus ditch, thus forming a funnel shaped entrance into the C2 Cursus from the south. This eastern ditch has been definitely traced for a distance of 430 m to the north-east

Figure 2.41: C2 Cursus south-west end

through a combination of excavation and crop marks (Fig. 2.40–2). The total length is unknown, due to destruction caused by a sludge lagoon. There was no convincing evidence for the continuation of this ditch into the excavated area (34) to the north of the lagoon, and we can thus be fairly confident that the eastern ditch of the C2 Cursus was between 430 m and 610 m in length.

The western ditch has been excavated for a total length of 122 m as it heads north-east from the C1 Cursus (Fig. 2.41). Unfortunately another sludge lagoon has destroyed a large area further north, but crop marks suggest that it did extend to the north-east, at least until it met the northern extension of Bronze Age Trackway 1 (Fig. 2.40). Unlike the eastern ditch, it is less certain that the western ditch extends beyond the lagoon and across Area 61. The most likely candidate for this ditch comprises features 673060 and 633192 (Fig. 2.43). These shallow ditch segments are on a slightly different alignment to the section of the northern ditch further to the south-west, but as Figure 2.40 shows, the C2 monument (like the C3 Cursus) is not as rigid in its orientation or constructional scheme as the C1 Cursus. A single sherd of Plain Bowl Ware was found in feature 673060, which would tend to confirm a Neolithic date for the

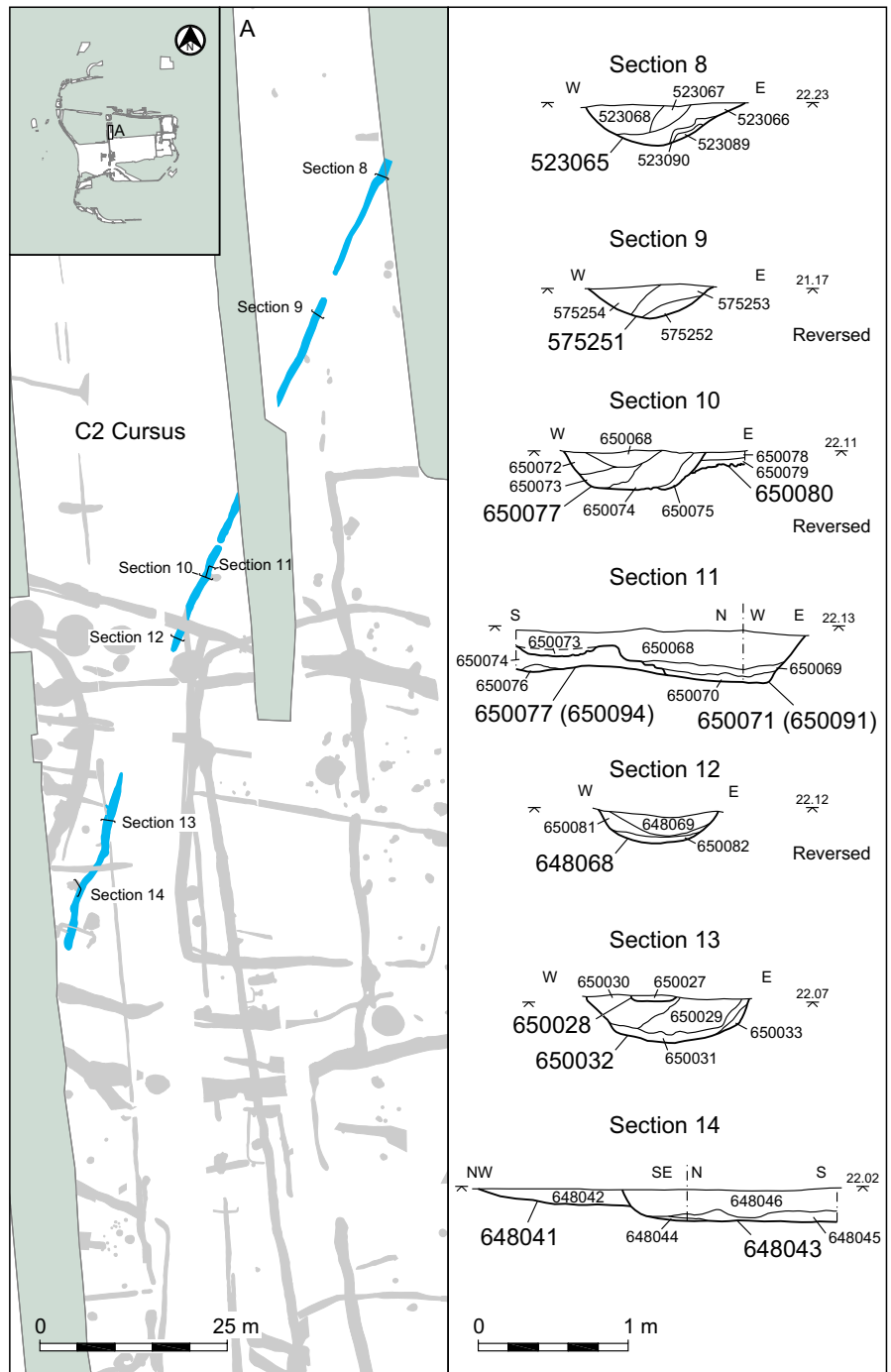
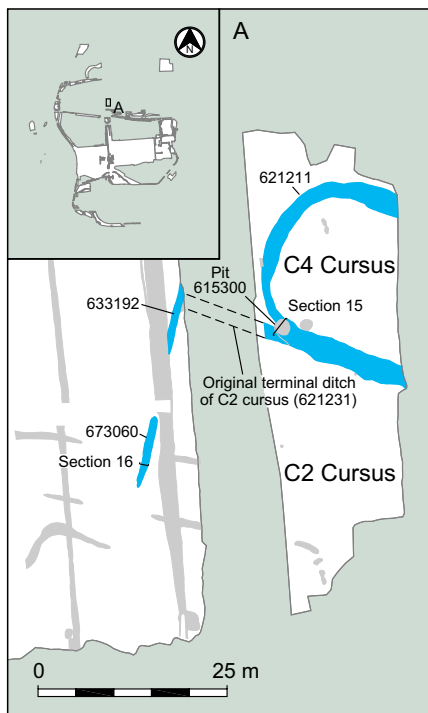
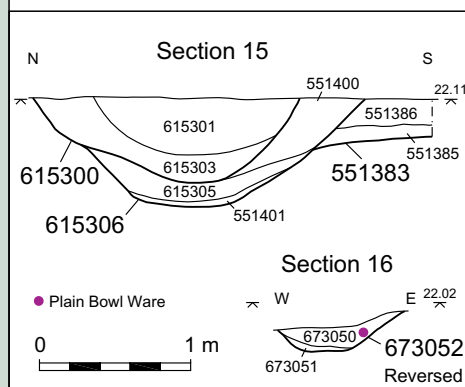


Figure 2.42: C2 Cursus central area

Figure 2.43: C2 Cursus north-east end



ditch. Conversely, ditch 633192 cuts a tree-throw (633144) that contained a single unequivocal sherd of post-Deverel-Rimbury Late Bronze Age pottery, suggesting the ditch probably dates to the 1st millennium BC or later. If these features do represent the northern C2 Cursus ditch, then it is entirely possible that the C4 Cursus formed a slightly later elaboration of the original terminal of the C2 Cursus. The basis for this reconstruction lies in a short length of ditch (621231), which may have formed the original northern terminus of the C2 Cursus, running at

C2 Cursus	Struck flint			Pottery				
	Ditch	Feature	Debitage	Tools	Unidentified		Plain Bowl Ware	
					No. sherds	Weight	No. sherds	Weight
West	132009	3	-	-	-	-	-	
	133035	2	-	-	-	-	-	
	134011	6	-	-	-	-	-	
	142008	6	-	-	-	-	-	
	524226	4	-	-	-	-	-	
	673060	-	-	-	-	1	2	
<b>Total West</b>		<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	
East	110011	4	1	-	-	-	-	
	522154	6	-	-	-	-	-	
	547241	2	-	1	3	3	4	
	596044	3	-	-	-	15	18	
	636048	33	1	-	-	-	-	
	650065	2	-	-	-	-	-	
	650091	31	-	1	3	-	-	
	961741	3	1	-	-	-	-	
<b>Total East</b>		<b>84</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>18</b>	<b>22</b>	
<b>Total</b>		<b>105</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>19</b>	<b>24</b>	

Table 2.14: Lithic and pottery assemblages from the C2 Cursus

right angles to the northern flanking ditch (673060 and 633192) (Fig. 2.43). At a slightly later date, the southern ditch (621211) of the C4 Cursus was dug along the same alignment as the original northern terminus (621231) of the C2 monument. This would have resulted in the C2 Cursus having the bank of the Stanwell C1 Cursus as its south-western terminus, and the banks of the C4 Cursus at the north-eastern terminus. Similar elaboration of the terminals of the Dorset Cursus have been noted, although in this instance the termini were fashioned to resemble long barrows (Barrett *et al.* 1991).

Having considered the extent and ground plan of the C2 Cursus we will now attempt to reconstruct the above ground architecture by considering the evidence from the ditches. The ditches are typically 1.4 m wide, but narrow in places to under 0.8 m. They are relatively shallow, typically between 0.15 to 0.3 m deep, although truncation has removed between 0.4 m and 0.8 m from the original ground surface. This truncation, combined with other disturbance from archaeological and modern features, makes difficult the detection of true gaps (and therefore the position of possible entrances) in the course of the ditches. As noted in Volume 1, the form of the C2 monument is more closely matched by

traditional cursus monuments such as the Dorset Cursus. We may therefore expect the spoil from the C2 Cursus ditches to have been piled up to form two parallel internal banks. However the evidence is far from conclusive. The sections published in Volume 1 (Framework Archaeology 2006, fig. 2.19) show slight evidence for the silting of the ditches coming from inside the C2 Cursus. Conversely, for the north-eastern section of the eastern ditch at least, sections 8 and 9 (Fig. 2.42) appear to show that the silting was predominantly derived from the east, implying the location of a bank outside the monument. One section of the cursus ditch (Fig. 2.42, Section 10) also appears to show material slumping into the eastern ditch from the east implying the bank may have been outside the monument. However, this material may have originated from the disturbed upcast from the hole of a fallen tree, (represented by tree-throw 650080) which was cut by the cursus ditch. There is thus a possibility that the location of the flanking ditches may have differed along the length of the monument, perhaps changing as new segments of the monument were built. Alternatively, the variations in the asymmetric silting along the course of the ditches may simply be the result of different forms and intensity of activity outside the monument.

Ditches dating to later periods which cut across the monument do not provide the same help in determining the position of the banks as those which cross the C1 Cursus. Whatever their position, it is highly likely that the associated banks were relatively wide, stable and low. Applying the same calculations to the C2 Cursus as we used for the C1 monument, the flanking banks could have been between 2.6 m and 3 m wide and 0.75 m to 1 m high (Framework Archaeology 2006, 69).

### Sequence of construction

The plan of the surviving C2 Cursus (Figs 3.40–3) strongly suggests that it was constructed as a series of interconnecting lengths of shallow ditch. The general homogeneity of the fills made the detection of these segments difficult in section, but one or two examples from the southern end can be demonstrated. Firstly, ditch 522154 was excavated through the upper fills of ditch 596044 (Figure 2.41, Section 7), implying that this feature had silted to a considerable degree before 522154 was either added or recut and renewed the original ditch line. Secondly, a short segment of ditch (650091) was added to the end of ditch 650094 (Fig. 2.42, Section 11), either to extend the monument to the north-east, or just as plausibly, to close a small entrance. In addition, there is some evidence (Fig. 2.41, Section 4) of recutting (137019) of the southern ditch (110011), although this could be connected with a Bronze Age field boundary (110014).

When the stratigraphic evidence is considered in conjunction with the discontinuous, sinuous nature of the ditches, it would seem likely that the C2 Cursus was constructed and/or maintained in a far less planned manner than the C1 or even the C3 Cursus.

### Chronology

Only a small number of finds were retrieved from the ditches of this monument (Table 2.14; Fig. 2.44). The flint assemblage broadly dates to the Neolithic, but the only retouched tools were two awls and a blade. The pottery assemblage consists of a handful of

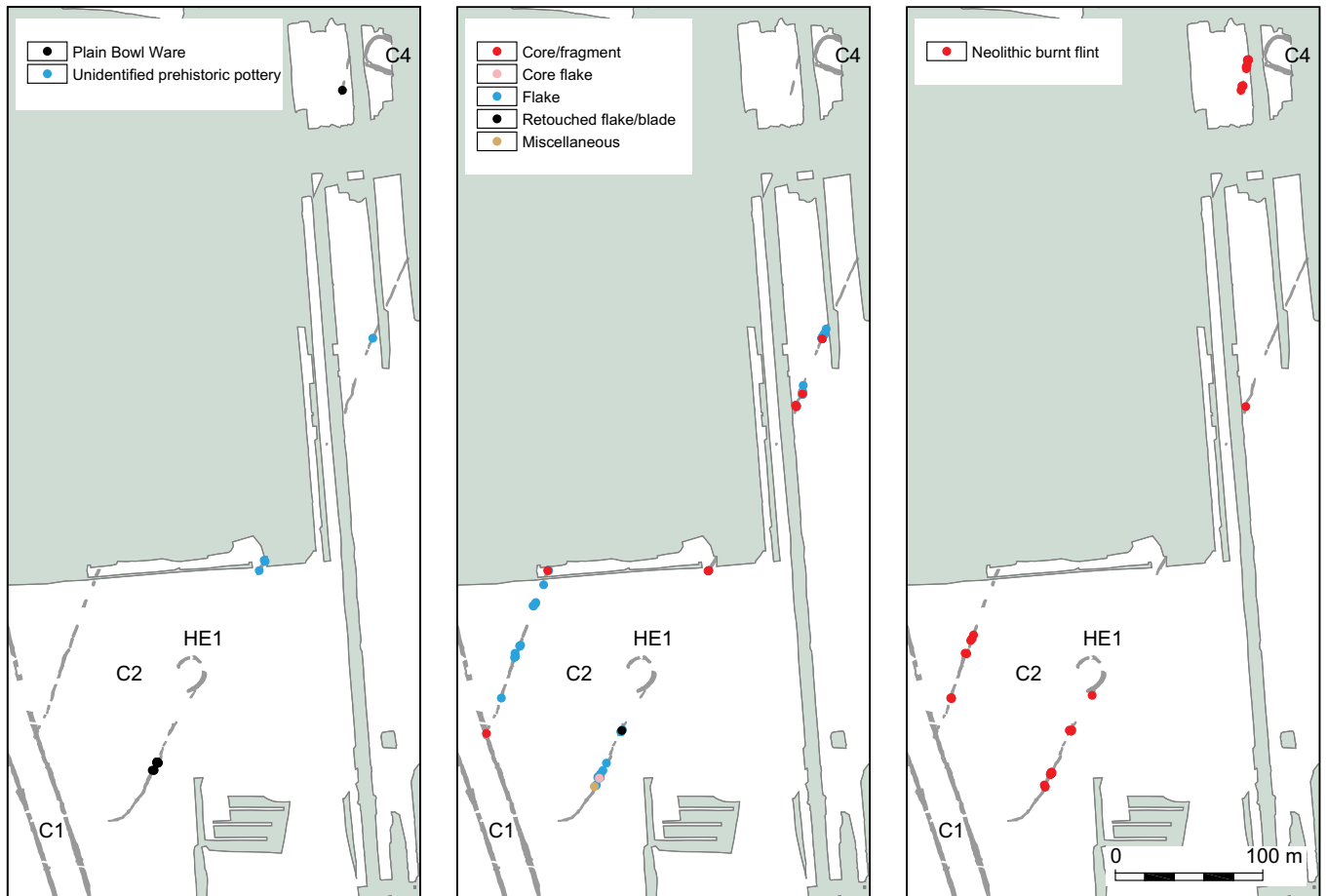


Figure 2.44: Neolithic and unidentified pottery, worked flint and burnt flint distribution within the C2 Cursus

tiny sherds, some of which are unidentifiable, whilst the rest can be classified as Neolithic Plain Bowl Ware. If these sherds are *in situ*, then they would indicate the C2 Cursus ditches were silting sometime from 3600 to 3300 BC onwards.

The small quantity of Plain Bowl Ware pottery (Table 2.14) is located near the north-eastern end of the western ditch, and near the south-eastern end of the eastern ditch. However, the small quantities involved make it difficult to determine if this is a significant distribution. The struck and burnt flint is more evenly distributed along both cursus ditches, and we are left with the impression that the finds assemblage from the ditches were probably generated by activities taking place in the landscape around the cursus rather than inside the monument.

As we have noted earlier, the form of the C2 Cursus is unlike the three other monuments excavated at Terminal 5 in that it is wider and more irregular

in plan and execution, perhaps suggesting that it was used by different (larger?) groups of people in slightly different ways to the other cursus.

We will now describe the C4 Cursus that appears to form the northern terminal of the C2 monument

### The C4 Cursus

The majority of this monument was destroyed by the construction of a large sludge lagoon in 1980, which makes it difficult to classify and date. Whilst it is likely that the monument was rectangular in plan, it could also have been oval or sub-rectangular, and was a point of much debate to the excavators. The monument was orientated at right angles to the course of the C2 Cursus, near the northern extremity of the narrow strip formerly occupied by the Duke of Northumberland's and Longford Rivers (Fig. 2.45 and also Chapter 1, Fig. 1.1).

The surviving remains form the north-western terminus of a rectangular enclosure, approximately 21 m wide and surviving for a length of approximately 19 m (Fig. 2.46; Plate 2.18). If, as has been previously suggested, the C4 monument formed an elaboration of the north-eastern terminus of the C2 monument, then we can predict that it originally extended for another 62 m to the south-east before meeting the eastern ditch of the C2 monument (Plate 2.19). There are certainly no traces of a parallel sided enclosure on the same alignment in the far eastern part of the Terminal 5 excavations, 640 m away.

Although the whole length of the ditch has been given a single feature number (621211), the plan of the C4 monument suggests that the northern and southern ditches were dug as separate features, and the western end ditch was added as a separate feature, although longitudinal sections through the ditches revealed no evidence to support this.



Plate 2.18: Photographs of section through the C4 Cursus ditch (top Section 2, mid Section 3, bottom Section 6)

The northern and southern ditches range from 2.8 to 3 m wide, whilst the western ditch is on average 2 m wide, but narrows to 1 m in the south-west corner. This narrowing could represent the blocking of an entrance, but again no stratigraphic evidence was present for this. The depth of the ditches ranged from 0.47 m to 0.63 m (with an average of 0.58 m). Interventions placed through the narrower western sections of the ditch demonstrated that the ditch was as deep if not deeper along this section of the monument.

The profile of the ditch was generally consistent throughout its extent, with steep sloping sides and a flat base and no evidence of recutting. Primary silting deposits were identified throughout the length of the monument, sealed by slow silting fills, confirming a lack of maintenance after construction. A large influx of material was then detected in the majority of interventions, probably derived from erosion and collapse of the adjacent bank. It is clear from the sections that

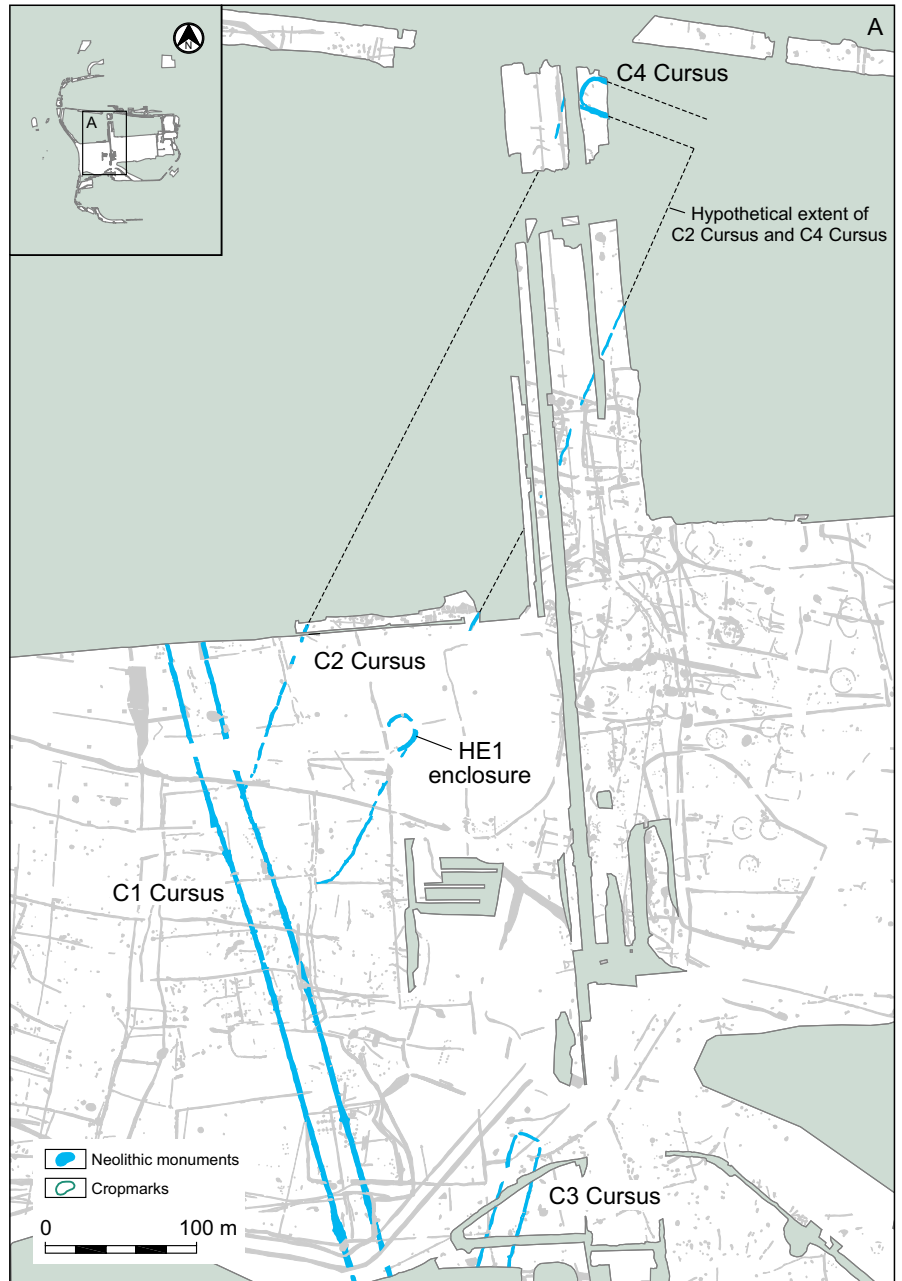


Figure 2.45: C4 Cursus location and relationship with C1 and C2 cursus monuments



Plate 2.19: Junction of the C2 and C4 Cursus

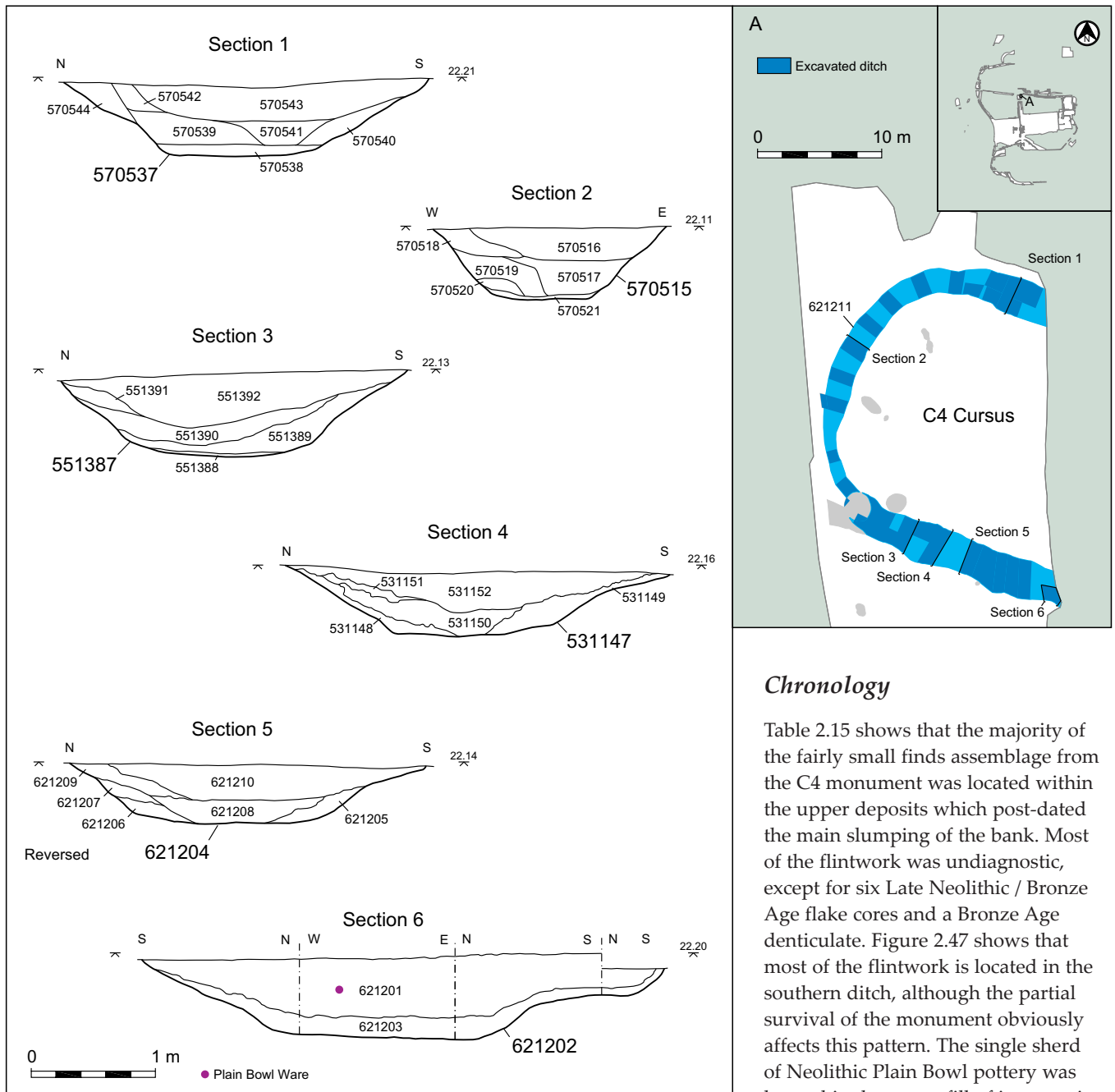


Figure 2.46: C4 Cursus, extent of excavation and sections through ditches

the bank was located externally to the northern and western ditches. However, the evidence is less clear for the southern ditch, where sections 3–6 (Fig. 2.46) show a much more even inflow of material from both inside and outside of the monument. If our contention that the C4 monument is a later addition to the terminus

(represented by ditch 551385) of the C2 Cursus is correct, then there would already have been an extant bank along this southern side. It is possible that the new C4 bank may have been constructed along the southern side of the extant and stable C2 bank, which slowed subsequent influx of material into the C4 ditch.

### Chronology

Table 2.15 shows that the majority of the fairly small finds assemblage from the C4 monument was located within the upper deposits which post-dated the main slumping of the bank. Most of the flintwork was undiagnostic, except for six Late Neolithic / Bronze Age flake cores and a Bronze Age denticulate. Figure 2.47 shows that most of the flintwork is located in the southern ditch, although the partial survival of the monument obviously affects this pattern. The single sherd of Neolithic Plain Bowl pottery was located in the upper fill of intervention 621202 in the far south-eastern excavated segment of the monument, although here there was no clear evidence of bank collapse (see above).

Table 2.15: Flint, pottery and bone from the C4 Cursus ditches

C4 Cursus - Feature 621211	Struck Flint		Burnt Flint		Plain Bowl Ware		Antler and Bone	
	Debitage	Tools	No.	Weight	No. sherds	Weight	No.	Weight
Deposits post-dating bank collapse	62	2	1	1	1	8	52	7
Primary silts and all deposits predating bank collapse	5	1	-	-	-	-	6	55
<b>Total</b>	<b>67</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>58</b>	<b>62</b>



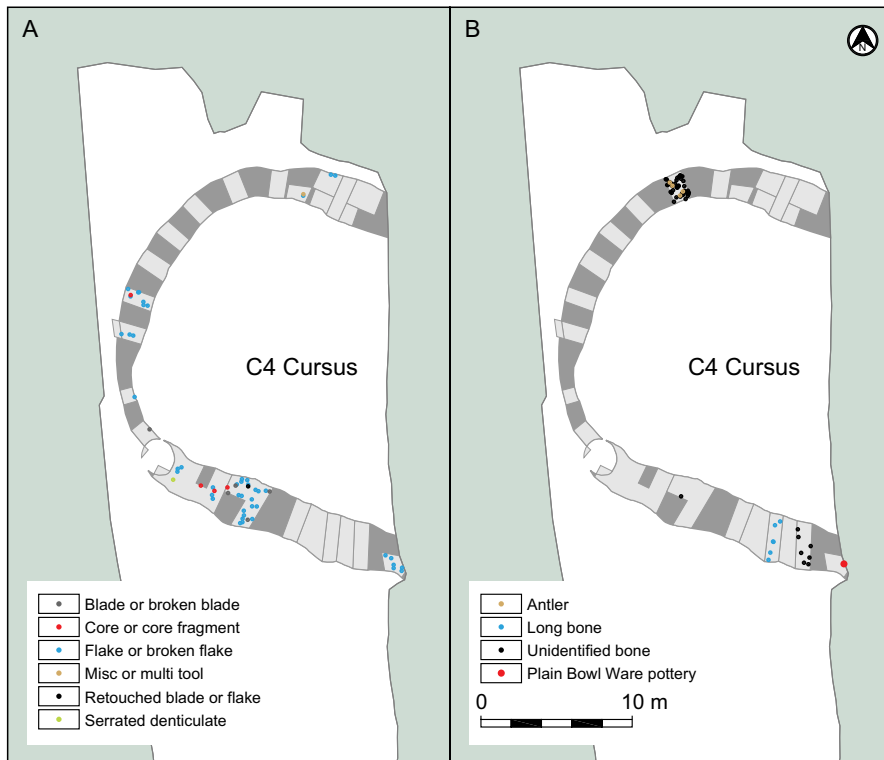


Figure 2.47: Distribution of worked flint, pottery and animal bone in the C4 Cursus

The animal bone was:

*...very badly preserved. What could be ascertained was that some antler fragments were present but it was not possible to say whether they were from a pick, had been worked or were from a hunted animal rather than gathered shed antler. Other bones were unidentified.*

*(Knight and Grimm, CD Section 13)*

These remains were all from deposits post-dating the bank collapse. The bone from the primary silts consisted of a cattle sized long bone. None of the bone contained sufficient collagen to produce a radiocarbon date: indeed some was so fragile that it did not survive excavation. Figure 2.47 shows that the distribution of flint and animal bone in the upper silts tends to be mutually exclusive. This suggests that the activity that took place in and around the monument after the collapse of the bank had a spatial structure, and that the material has not become incorporated randomly. To take this observation further, it would seem that although the original architecture of the monument was now in ruins, it still acted as a focus for structured human actions.

In summary, the finds assemblage provides little in the way of dating evidence for the construction of the C4 monument. The paucity of finds in the lower fills is in keeping with the other Neolithic monuments from Terminal 5 and elsewhere at Heathrow (Canham

1978, 6–7). The finds assemblages from the deposits post-dating the ditch collapse clearly indicate human activity in and around the monument after it had fallen into decay. Judging from the flint, this could probably be sometime during the 3rd millennium BC, although the single sherd of Plain Bowl pottery suggests a date in the late 4th millennium BC.

### Architecture

The truncation model shows that between 0.75 and 1 m of topsoil and subsoil has been removed from the area of the C4 monument since 1943. If we take the average width of the northern and southern ditches to be 3 m, an average depth of 0.6 m for the northern ditch and 0.5 m for the southern ditch and a 'V' shaped profile, we can estimate a cross-sectional area of the ditches as excavated to be approximately 0.8 to 0.9 sq m. If we double this area to allow for truncation, and multiply by an expansion factor of 1.1, we can predict that the banks would have had a cross-sectional area of between 1.7 and 2 sq m. Allowing for a maximum slope angle of 40 degrees, this would suggest that the northern bank would be 3 m wide at the base and 1.33 m high, with

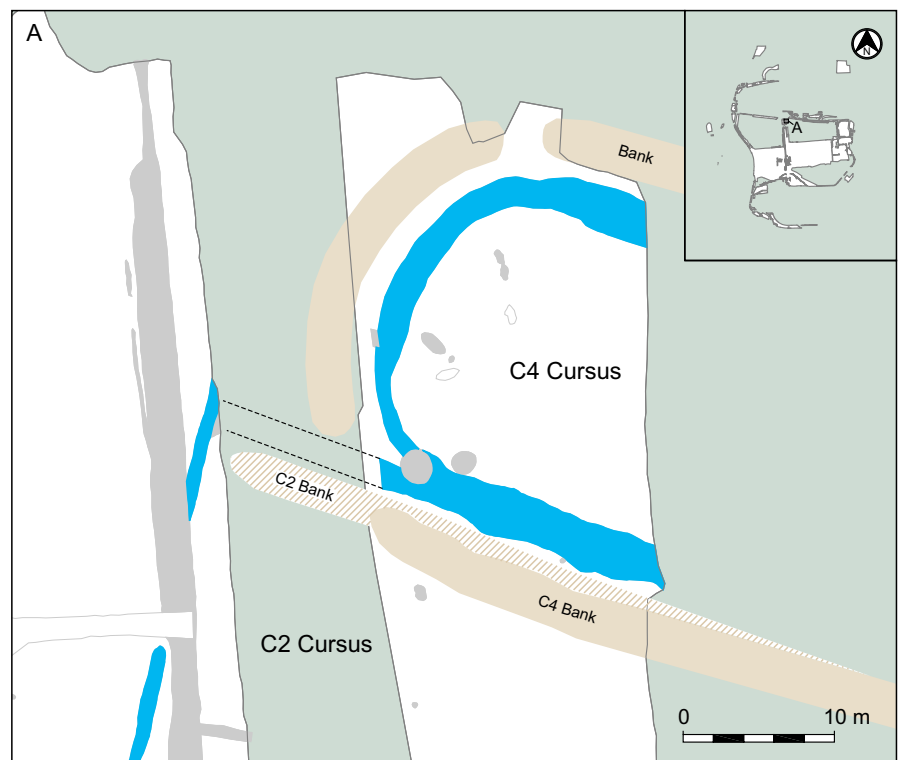


Figure 2.48: Architecture of the C4 Cursus

the southern bank possibly slightly lower at 1.13 m high (Fig. 2.48). The western ditch, being narrower, would have produced a bank 2.5 m wide at the base and approximately 1 m high. This suggests that the northern and southern banks were the main concern of the people who built the monument, and accords with the premise that the C4 monument served to embellish the terminus of the C2 Cursus. We have already shown that there is good evidence of a sudden collapse of the bank material into the ditches, suggesting some form of revetment. Whether the banks were fully or partially revetted is impossible to deduce, and the following suggestions are just two amongst many alternatives. A fully turf revetted bank 1 m wide could reach a height of 2 m, but would be inherently unstable. A bank partially turf revetted to 1 m high and 1.5 m wide could support a further dumped bank 0.66 m high on top. Whatever the configuration, the adoption of a turf revetment would seem to indicate that the objective was to construct banks which were higher than simple dumping would allow.

A similar juxtaposition of linear enclosures was excavated at in the Upper Thames at North Stoke, Oxfordshire (Case 1982). Here, two narrow, parallel ditches set 9 m apart and approximately 230 m long were interpreted as a bank barrow (*ibid.*, 69). This monument clearly forms part of the continuum of long enclosures, bank barrows and cursus (Loveday 2006, 92–8, 204), and produced a radiocarbon date which places its construction in the period 3600 to 3300 BC (Case 1982, 64; Bayliss *et al.* in Barclay *et al.*, 2003, 184). At the southern end of the North Stoke bank barrow was a second linear enclosure which was orientated at right angles to the bank barrow / cursiform monument. The southern enclosure was interpreted as a long mortuary enclosure (Case 1982, 69) a class of monument which has since been reinterpreted as ‘Long enclosures’ and part of the cursus continuum (Loveday 2006, 58–59).

The southern enclosure ditches were approximately 12 m apart and were broader and shallower than that of the

bank barrow. Like the C4 Cursus, only a short portion of the southern enclosure survived, so its exact length is unknown. In common with the C4 Cursus, there was evidence of external banks, although there was also evidence for the presence of more substantial internal banks as well. Also in common with the C4 cursus, the ditches appear to have been filled with bank material, although they had undergone subsequent re-cutting (Case 1982, 68). Although there were no direct stratigraphic relationships, the southern enclosure was interpreted as preceding the North Stoke bank barrow (Case 1982, 69; Loveday 2009, 59), whereas we have come to the opposite (although tenuous) conclusion with the relationship between the C2 and C4 monuments.

### **The rationale and consequences of the construction of the cursus complex**

We have previously argued that the Late Mesolithic landscape of mixed deciduous woodland (dominated by Oak, Elm, lime and hazel) on the Heathrow Terrace and the alder carr woodland and reed dominated wetlands on the Colne floodplain were criss-crossed with pathways linking clearings which, although of economic importance in terms of subsistence, were principally social areas facilitating human interaction. We have shown two examples of such locations, with the post / stakehole structure at Bedfont Court and the pit complex filled with burnt flint on the edge of the terrace. The latter location is a particularly important example, since the act of cooking would have led to both a breaking of the ground with pits, but also the raising of a midden of refuse, leaving a physical marker of human gathering and interaction within a clearing in the landscape. Other locations and clearings would have been the scene of different activities, the only traces which are left to us being lithic artefacts residing in much later ditches and pits. It is most important to remember that the importance of this activity lies not in the deposition of the material, but in the discourse, negotiations, retelling of oral

history and reaffirmation of what it means to be human, and to be related to other people and other families. We could therefore argue that locations such as the burnt pit / midden were one of the earliest monuments, since it embodied the physical remains of a process of human interaction at a particular location, and thus provided a focus for repeated meetings and social discourse around fires and earth ovens, leading to enlargement of the midden.

It is within this landscape of physical manifestation of social networks that the first adoption of agriculture occurred around the turn of the 5th and 4th millennia BC. A recent review of radiocarbon dates for the adoption of agriculture in Britain (Brown 2007) has concluded that on the basis of charred cereal remains, crop cultivation in Britain and Ireland occurred no earlier than *c* 3950 cal BC, and that this date is in agreement with the earliest dates from megalithic chambered tombs and domestic structures in Britain and Ireland. Only a small number of radiocarbon dates on cereals fall between 4000/3950 and 3800 cal BC, with the majority occurring from 3800–3000 cal BC. This suggests a transitional period of *c* 150–200 years between 4000/3950 and 3800 cal BC before a Neolithic lifestyle became a more established feature in Britain. Thus the transition from Mesolithic to Neolithic was relatively rapid, rather than gradual (Brown, 2007, 1050). The Neolithic ‘house’ structure recently excavated by Wessex Archaeology at Horton, approximately 3.5 km to the WSW of Terminal 5 on the Colne floodplain has produced a radiocarbon date of *c* 3940–3780 cal BC (A. Barclay pers. comm.), thus dating this rectangular structure to the ‘transitional’ period discussed by Brown. A similar rectangular ‘domestic’ structure associated with plain undecorated pottery was excavated in the early 1990s at Cranford Lane, approximately 4 km to the ENE of Terminal 5 in the Crane valley (MoLAS unpublished report), and thus by analogy probably dates to the same period.

Furthermore, modelling (a small number of) radiocarbon dates from

the Thames estuary suggests that diagnostic Neolithic material had appeared by 3935 cal BC at the latest, and preceded causewayed enclosures by 95–410 years (Bayliss *et al.* 2008, 35). Furthermore comparisons with dates from the south-west peninsula of England suggest that the Neolithic did not appear everywhere across Britain at the same time, and that a transitional period of several centuries persisted.

It is only after this period of transition that causewayed enclosures were constructed, from the 38th and 37th centuries BC (Bayliss *et al.* 2008), roughly coincident with the elm decline and the increasing cultivation of cereals. The reasons for the construction of causewayed enclosures lie outside the scope of this volume, but many theories have been put forward to explain their construction and use (Oswald *et al.* 2001). These have included feasting, exchange and manufacturing, seasonal gatherings, settlement, funerary ritual and defence (*ibid.*, 123–131). We mention some of those theories here, since the Terminal 5 cursus complex was located near a series of causewayed enclosures, including Yeoveney Lodge Staines (Robertson-Mackay 1987) and possibly Mayfield Farm, East Bedford. A recent theory sees causewayed enclosures as an idealised ‘Folk Memory’ of the form of early enclosed settlements on the European mainland, such as that at Darion, Belgium (Oswald *et al.* 2001, 122). The frequent recutting of the ditches and special deposits of artefact placed within them has often been commented on. The enclosure ditches would have formed a focus for people to come together, and the creation and re-creation of the ditches may have helped to confirm links between groups and individuals, thus establishing a place of lasting significance (Bradley 1998; Oswald *et al.* 2001, 122).

It is possible that some of the smaller circular monuments we will discuss later, such as the inner enclosure at Horton (Ford and Pine 2003), were contemporary with the causewayed enclosures. It is sometimes easy to forget that the first half of the 4th millennium must have been a time of enormous social, economic and

technological upheaval. Within the space of four hundred years, a social and economic order based on human interaction at clearings and other places in the forest and supported by procuring wild flora and fauna that had lasted for over 5000 years had been dislocated. Agriculture had been pioneered (possibly by groups from the continent), ceramic technology and a new lithic repertoire introduced, and a combination of anthropogenic action and disease had opened up the forest clearings allowing for land to be cultivated and grazed by domesticated animals, transforming an ancient wilderness. It is hardly surprising that we see a society that appears to be seeking ways to come to terms with these changes, at first through the construction of tombs, then through the construction of large and small scale communal monuments, all the while developing meanings in patterns of artefact design, use and deposition.

It is against this background that we see the construction of the cursus monuments of the latter half of the 4th millennium BC. Although probably slightly later in date than the Staines Causewayed Enclosure, the similar relative positions of Plain Bowl and Peterborough Ware pottery in the ditch fills of the enclosure and the C1 Stanwell Cursus suggest very little chronological separation in the use of these monuments.

Why cursus were built has been a puzzle for many years. Their general emptiness of structures and finds has long hindered their dating and interpretation. However more recent work (Barrett *et al.* 1991; Tilley 1994; Barclay and Maxwell 1998; Barclay and Harding 1999; Barclay *et al.* 2003; Loveday 2006) has refocused attention on cursus, and has started to provide ways of thinking about these monuments which move beyond merely functional interpretations. Barclay and Maxwell (1998, 114) list these various interpretations as:

1. Structures for formal processions or for orchestrated journeys of experience (cf Tilley 1994);

2. Structures linking pre-existing monuments or significant places (cf Barrett *et al.* 1991);

3. Structures demarcating an alignment on a place, object or astronomical event, rather than linking anything;

4. Symbolic or physical barriers between areas of different significance (eg wild and domestic land), which may involve symbolic control of access between the two (cf Hodder 1990);

5. Symbolic ‘project’: the physical expression of a social or ideological need;

6. A *temenos*: an area of land marked off and devoted to the gods and which becomes a cult centre (Loveday 2006).

As Loveday (2006, 126) has observed, none of these interpretations are mutually exclusive and indeed problems arise when only one or two of these interpretations are applied to cursus monuments.

Almost all of these interpretations could apply to the Terminal 5 cursus complex, given the different architectural forms, sizes and orientations of the monuments.

If we start by considering what were possibly the earliest monuments, the C5 / C3 Cursus, their alignment suggests an origin (with the C5 Cursus) on the Colne floodplain, with the orientation pointing the way onto the Heathrow Plateau. This appears to have been extended by the addition of the C3 Cursus which, as we have seen, terminated on the terrace edge itself, close to the location of the Area 49 settlement. We have no firm evidence for the C3 Cursus linking important places together, other than extending the line of the C5 monument and terminating close to a possible settlement. However, the orientation of these monuments does suggest the formalisation of a route out of the Colne floodplain. As we have discussed, the Colne and Thames floodplains were the location of causewayed enclosures that probably predated the Terminal 5 cursus complex, the rich settlement evidence

at Runnymede and the Horton 'house' that dates to the earliest 'pioneering' phase of the adoption of agriculture. It is entirely possible that agriculture and the 'Neolithic concept' was pioneered locally at the beginning of the 4th millennium on the less densely wooded Colne and Thames floodplains before spreading onto the increasingly cleared Heathrow Terrace. If so then the C3/C5 Cursus monuments could signify an architectural formalisation of the process, which allowed movement into and agricultural exploitation of new landscapes to be enshrined in ceremony. It is perhaps significant that the C3 Cursus is the only monument that provided clear evidence for several phases of ditch recutting or extension in short segments. In this respect the ditches share similarities with causewayed enclosure ditches (though not in terms of finds assemblages), and does suggest an episodic extension or maintenance of the monument as part of an on-going process or idea.

If our interpretation of the crop mark evidence is correct, then the construction of the C1 Stanwell Cursus followed next. The impact of the C1 Cursus, a long, low mound or 'causeway', bisecting and radically altering the landscape, cannot be understated (see artist's reconstruction in Plate 2.20). The C1 Stanwell Cursus was constructed by a society that was already well used to undertaking monumental projects, but the cursus marks the appearance of a form of monument radically different to the causewayed enclosures, and which altered the landscape on a grand scale. The C1 Cursus was without local precedent and it reflects the desires and motivation of the people who built it.

Before examining this, it is worth considering in a little more detail the effects on the landscape of the monument. As we will discuss below, it linked together a string of locations along the boundary of the Colne floodplain and the Heathrow Terrace, but it also acted as a physical and psychological demarcation of these two different landscapes. This would appear to be at odds with our suggestion of the C3/C5 monuments as formalising routes onto

the terrace from the floodplain. However, the backfilling of the C1 Cursus ditches to the north of the C3 Cursus suggests that this was rapidly re-thought and modified to allow access onto the terrace. Before moving onto considering the architecture of the C1 monument and our interpretation of the society that constructed it, it is worth considering further effects of the monument on the landscape.

Firstly, the causewayed enclosures that probably pre-dated the cursus complex enclosed relatively small areas at specific points in the landscape. For example, the Yeoveney Lodge monument enclosed approximately 2.4 ha (Robertson-Mackay 1987, 23), whilst the Mayfield Farm, East Bedfont crop mark (if it is indeed a causewayed enclosure) encompasses approximately 2.8 ha. In contrast, the C2 Cursus encloses approximately 4.5 ha, whilst the C1 monument covers approximately 8.7 ha. Not only do the two major Terminal 5 cursus monuments enclose larger areas than the causewayed enclosures, due to their linear nature they 'sample' a much greater cross-section of the landscape. Finally, the C1 Stanwell Cursus creates a western boundary to the Heathrow Plateau. If we accept the southern boundary as the break of slope between the Taplow and Kempton Park terraces, the eastern boundary as the River Crane and the northern boundary as the junction of the Taplow and Lynch Hill terraces, then the area thus defined covers approximately 32 sq km. The eastern boundary (River Crane) has seen little fieldwork, but there are a string of small Neolithic monuments located south of the northern boundary (Crockett 2001). Crop marks along the southern boundary include the Mayfield Farm enclosure and a string of ring ditches, which as we will see, could date to the 4th or 3rd millennia. The important point is that the C1 Cursus seems to have initiated or at least formalised the concept of the entire landscape as a monument, within which activities and smaller monuments could be constructed.

Turning to the social implications of the actual C1 monument, it is

impossible, due to profound changes to the landscape, to attempt to construct the sort of perceptual narrative for the Stanwell Cursus that Tilley (1994, 173–200) produced for the Dorset Cursus. We acknowledge that people move through the landscape for purposes other than ceremonial or ritual; that people would have inhabited the landscape and utilised the natural resources for subsistence. Nonetheless, prior to the construction of the C1 Cursus, people moving from place to place along the floodplain margins did so along a path that was only formalised and maintained by human memory and agreement. Each place visited may have been consecrated with a ceremony that may or may not have included the deposition of artefacts, but the important element of ceremony would have been the ritual, the display and the words exchanged between the participants and onlookers.

What was the importance of these locations and why were they revisited? We of course cannot answer this, but it is our view that one of the important subtexts of the ceremonies and processions was the concern with access to the resources of the landscape. Throughout the Mesolithic this concern may have been settled in many different ways, and had to take into account mobile and seasonal resources of animals as they moved through the landscape. Indeed it is possible that the burnt flint pit cluster and possible midden described above may have acted as a meeting place and context for settling these concerns in the 7th to 6th millennia BC. We have discussed how the adoption of agriculture may have taken place several centuries after 4000 BC, and wild resources continued to play a major part in the subsistence economy. As we have shown previously, with the exception of 'type fossils' such as microliths and leaf-shaped arrowheads, it is hard to distinguish chronologically the lithic assemblage for this period, and this suggests relatively minor changes in the subsistence economy.

However, after 3800 BC the cumulative impact of agriculture and pastoralism,



Plate 2.20: Artist's reconstruction of Neolithic monumental landscape

coupled with new technologies and new expressions of old practices in the form of the first monuments, meant the world was being transformed. Individual kin-groups now had to resolve questions and conflicts regarding access to land and resources. How was it decided where a group would plant this year's crops? Who grazed their animals on a certain stretch of the floodplain? Who placed this year's settlement in the old woodland clearing, or burnt some fallen trees to create a new field? We suggest that the ceremonies undertaken at certain locations in the landscape helped to facilitate these decisions. In the centuries immediately prior to the construction of the cursus monuments, these ceremonies and gatherings probably focused on locations such as the timber posthole complexes and causewayed enclosures. If these monuments had been abandoned prior to the construction of the cursus, then the differences in architecture and the disparity in the finds assemblages in terms of variety and abundance suggest a major change in the way societies organised themselves and the landscape. The relatively rich finds assemblages from causewayed enclosures suggest that the resources of the landscape (and the

people that procured them) were being gathered to the monuments. We have described above how in contrast, the C1 Cursus took the concept of the monument out into the landscape and turned the landscape into a monument.

Returning to the more mundane locations such as the timber complexes, perhaps each was of importance to separate kin-groups. As the generations passed, the ceremonies changed and developed. Some locations were forgotten, others increased in importance, new ones emerged and others were embellished architecturally, for example, the timber post alignment. If so, then the string of locations which grew up along the boundary of the Colne floodplain and the Heathrow Terrace to the east show that this zone was of crucial importance, since it marked the boundary between the water resources of the floodplain and the dryer, higher terrace to the east. It is perhaps not surprising then that the places and ceremonies began to be linked together by ceremonial processions.

We do not know how many people took part in these processions and ceremonies or how they were arranged or led. Without formal demarcation,

the processions and ceremonies could have been viewed by all. The important point is that the kin-groups or communities associated with individual locations were now linked together by processional pathway and ceremony. Through this process the separate groups started to form into a larger, more cohesive community. Whereas before disputes and negotiations over land and resources occurred *between* separate kin-groups and were resolved through ceremony at distinct locations, now negotiations were contained *within* a wider community, whose important ceremonies and locations were linked by procession.

The creation of a *community* at this time is pivotal. It could be said that, without a community, the opportunities for forest clearance and agricultural expansion represented by the 'elm decline' could not have been exploited, and causewayed enclosures and cursus could not have been built. We view the construction of the C1 Cursus in particular as a physical manifestation, formalisation and celebration of the emergence of a community. We have shown how the cursus was built in sections, each by a small team of people, and we can see how each

section was built by a team drawn from the individual kin-groups, and each group probably built a length of cursus associated with their own ceremonial location. The result was a monument that physically tied together all the groups through shared labour in a common enterprise to build a communal monument, which bound together the histories of the individual groups as invested in special locations.

Although the architecture of the mound served to restrict the numbers of people who could process along its length at any one time, most of the community would probably have been engaged more in observing the ceremonies than in taking part. The architecture of the Stanwell Cursus now served to emphasise the processional ceremonies along the top of the bank in a way that was impossible with an informal pathway at ground level. Although the leaders of the processions might have been differentiated from the rest of the community, the community remained an essentially open one. The participants were now on very obvious display against the horizon and visible for all to see (Framework Archaeology 2006, plate 2.6 and this volume Plate 2.17). Thus the architecture of the C1 Cursus did not mask the activities that went on inside to the exclusion of those outside, unlike those with a pair of flanking ditches such as the Dorset Cursus. The C1 Cursus was the product and celebration of an essentially open community.

The cursus acted as a unifying device for the community, and there is some evidence that the special places now cut or buried by the monument retained their importance, and may even have been involved in the ceremonies associated with the processions. Two examples serve to demonstrate this. The first is the occurrence of fragments of cow skull in the middle fills of both cursus ditches adjacent to the Mesolithic burnt flint pit complex (Fig. 2.49). Burnt flint clusters also occur in these locations. We consider the flint to be of Mesolithic date, and this may also be true of the skull fragments. However it is conceivable that they represent the

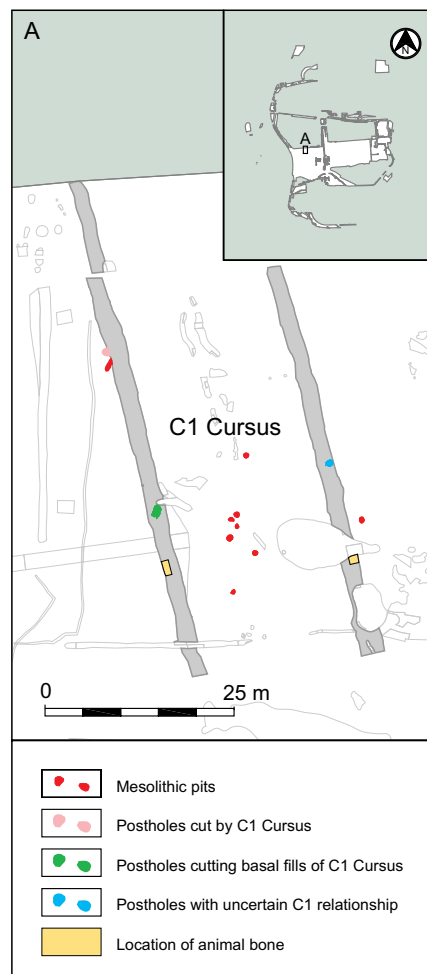


Figure 2.49: Relationship between animal bone, Mesolithic pits and postholes in the C1 Stanwell Cursus

residues of ceremonies enacted at the location following the construction of the cursus. In the absence of radiocarbon dates this is impossible to determine. If the animal bone is contemporary with the middle fills of the cursus, then this would explain the presence of a posthole cutting the basal fills of the western ditch from this level, and another posthole in the eastern ditch, which had unclear stratigraphic relationships. Put simply, the posts may have been driven into the basal fills of the ditch to serve as markers signifying the location of the pit complex and midden once the cursus had buried these sites. The burnt flint and animal bone may then be seen as the remnants of ceremonies undertaken once the procession had stopped at this location.

This association of burnt flint and postholes sealed by the middle fills of the cursus is repeated further south at the location of the earlier timber post

alignment (Fig. 2.50). Again, one or possibly more postholes were driven through the basal fills of the cursus from the middle fills. These fills also contained relatively large amounts of struck and burnt flint and show that the C1 Cursus remained a focus of activity throughout the remaining depositional sequence. Furthermore, we have demonstrated that with the adoption of Peterborough Ware pottery, the C1 monument underwent modification in Area 28.

This C1 monument's precision in layout and adherence to a specific template also allowed for the incorporation of earlier locations, and the continuation of ceremonies at these locations. Its construction was a product of the community and tied together the disparate histories of the constituent kin-groups. However the C1 Cursus also reflected the transformation in society and the landscape. A smaller group of people would now actively take part in the processions along the top of the bank. Ceremonies, the sub-texts of which were concerned with land and resources, would be led and mediated by that smaller leadership group. Nonetheless, the wider community was not isolated: the C1 Cursus facilitated their involvement and allowed all to see the ceremonies and processions.

We have suggested that the C2 Cursus was constructed shortly after the C1 monument. The architecture of the C2 monument was radically different from that of the Stanwell Cursus, for it served a different purpose. The C2 Cursus linked the location of the timber posthole complex and possibly the HE1 Enclosure which may have already existed at this time. Most importantly, the wide spaced ditches of the C2 Cursus allowed the community to take part in the procession between these locations, even if they were physically excluded from the ceremonies that took place within small enclosures such as the HE1 monument. Once more, the C2 Cursus echoes the theme established by the C3 / C5 monuments in that it suggests a route from the edge to interior of the Heathrow Terrace. The final stage of the Terminal 5 cursus complex saw the elaboration of the



Figure 2.50: Relationship of postholes, burnt/struck flint and other artefacts with the C1 Stanwell Cursus

northern terminal of the C2 Cursus by the construction of the C4 monument.

We can see how the Terminal 5 cursus complex could have fulfilled all of the possible functions suggested for cursus monuments listed above, but we have focused on the role of these monuments in establishing and maintaining the cohesion between the family groups that formed the wider community. Before moving on to examine how the community adapted to the world of monuments they had created, and how the landscape developed in the 3rd millennium BC, we will briefly

consider how the Terminal 5 cursus complex compares with other cursus monuments and complexes in Britain.

The cursus monuments of Britain have undergone considerable research over the last 10–15 years. The Dorset Cursus has been studied both in the field and from a phenomenological viewpoint (Barrett *et al.* 1991; Tilley 1994), while the ‘long mound’ cursus of Cleaven Dyke in Scotland has been excavated and surveyed (Barclay and Maxwell 1998). The proceedings of a seminar on cursus monuments has been published (Barclay and Harding 1999) and the

cursus monuments of the Upper Thames Valley have been described in some detail (Barclay *et al.* 2003), while a recent overview of cursus monuments has also been published (Loveday 2006). In view of this wealth of published data and synthesis, this section will focus on comparisons with the Cleaven Dyke and Scorton ‘long mound’ monuments, the Rudston complex and the Upper Thames cursus complex (Fig. 2.51).

The Cleaven Dyke in Tayside, Scotland, is a remarkably preserved monument, approximately 2000 m long, with ditches between 38 and 50 m apart (Barclay and Maxwell 1998). Dating evidence is circumstantial, but probably lies in the late 5th to mid/late 4th millennium BC. The monument has a central bank, varying between 7 m and 15 m across, and up to 1.7 m high. The central bank was constructed as a series of linked mounds from north-west to south-east. The north-western terminal was formed by a Neolithic oval mound and a long barrow. The use of the C1 mound by the C2 Cursus as a terminal is reminiscent of this arrangement.

The Scorton cursus in North Yorkshire (Topping 1982) is *c* 2000 m long and the banks are placed *c* 32 m apart. Like the Cleaven Dyke and Stanwell C1 Cursus, a single central bank was also present, though very eroded and dispersed (Loveday 2006, 97).

Perhaps the closest analogy to the Terminal 5 Cursus complex is at Rudston, East Yorkshire, where there is an unrivalled (with the exception of Terminal 5) concentration of cursus monuments (Fig. 2.51). The approximate dimensions of the four cursus are as follows (from Loveday 2006, 203):

- Cursus A: 2700 m long and 58 m wide;
- Cursus B: 1550 m long and 65–80 m wide;
- Cursus C: 1480 m long and 50–60 m wide;
- Cursus D: 4000 m long and 50–90 m wide.

The scale of these monuments far exceeds most of those at Terminal 5 in terms of length and width (see Table 2.10 above for comparisons), with only the C1 Stanwell monument comparing closely in length to Cursus D at Rudston.

The relative order of construction of these monuments sees Cursus A being constructed first, followed by C and finally D. The lack of a stratigraphic relationship with Cursus B means its place in the sequence is unknown but it could, on morphological grounds, post-date Cursus C (Chapman 2005, 162). As with Terminal 5, the longest monuments (Cursus D and the Stanwell C1) are preceded by earlier cursus. GIS analysis of the Rudston complex suggests that with the earlier monuments, somatic experience generated through movement along the interior of the monuments was of importance, but that this lessened with the later cursus which were more in harmony with the natural landscape (Chapman 2005). At Rudston several long barrows are located near the cursus, but the dates of the great barrows of Willy Howe and Southside mount are uncertain. At the centre of the complex is the 7.7 m tall Rudston Monolith, considered to be broadly contemporary with the cursus (Manby 1988). The Maidens Grave Henge, close to Cursus D, post-dates the complex (Chapman 2005, 160). Thus, unlike the Terminal 5 complex, the Rudston Cursus are preceded in the earlier 4th millennium BC by long barrows and followed in the later 3rd millennium BC by a henge. This general monument sequence is also apparent in the Upper Thames.

The concentration of cursus monuments in the Upper Thames Valley is remarkable, with ten certain or probable monuments (Barclay *et al.* 2003, figure 10.1, table 10.2). Of these, the North Stoke monument is pertinent, as it is 240 m long and 20 m wide, and possessed a central bank. Its orientation is the opposite of the C1 Stanwell Cursus, but apart from this and the much shorter length, their basic form is similar. A comparison of the Terminal 5 complex with the Upper

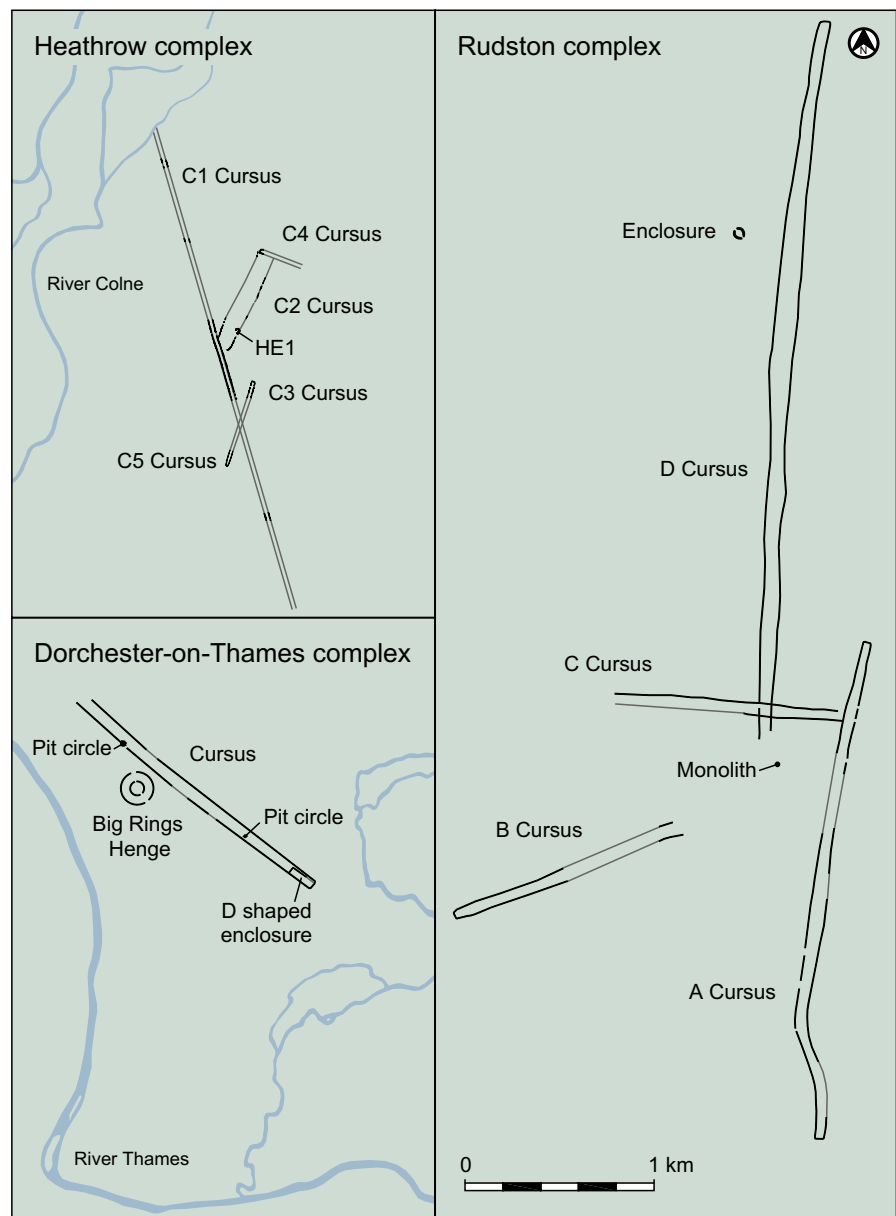


Figure 2.51: Neolithic monuments at Rudston, East Yorkshire (after Loveday 2006 and Chapman 2005) and Dorchester-on-Thames

Thames monuments reveals some similarities and contrasts.

- The Upper Thames cursus monuments are concentrated near the confluences of the Thames and its tributaries; the Terminal 5 complex is located near the confluence of the Colne and the Thames.
- The Upper Thames causewayed enclosures and cursus monuments have a mutually exclusive distribution (Barclay *et al.* 2003, 224); the Terminal 5 cursus complex is located close to a string of Thames-side causewayed enclosures and one probable enclosure at East Bedfont.
- The Upper Thames cursus monuments are associated with long and oval Barrows; long and oval Barrows are rare or unknown in the Middle Thames, but the Terminal 5 complex was preceded by a timber post complex.
- One Upper Thames cursus (Dorchester-on-Thames) is associated with a major henge monument (Big Rings) and most are associated with Bronze Age barrows; major henges are rare or unknown in the Middle Thames, and no certain Bronze Age barrows are associated with the Terminal 5 complex (apart from possibly the HE3 enclosure; see below).



It would therefore appear, from the perspective of monument types, that Rudston and the Upper Thames and Terminal 5 complexes had two different monumental sequences through the 4th and 3rd millennia BC. This would suggest that the communities of the Upper Thames and Rudston, prior to c 3600 BC, adopted different monumental strategies to those of Heathrow to aid in the shaping of their society. However, from c 3600 to 3100 BC, the people of Rudston, the Upper Thames and Heathrow all chose the national phenomena of cursus construction to enhance the cohesion of their communities. In contrast, from 3000 to 1600 BC, the communities once again adopted different monumental traditions.

### Adapting to transformation: the late 4th and the 3rd millennia BC

The period following the construction of the major monuments from 3300 BC to the emergence of the first field boundaries between 2000 BC and 1700 BC is not well represented at Terminal 5. For instance, Peterborough Ware was only recovered from a limited number of pits, tree-throws and the higher fills of earlier monuments, and Grooved Ware was mainly recovered from a few pits. As we have seen, our lithic chronology is not sufficiently refined to allow us to use those artefacts to examine this period in detail.

It is worth discussing the meagre data from Terminal 5 at the outset, before moving on to outline some of the trends that may have taken place in the community of the 3rd millennium BC. We will do this by analogy with the material in West London and nationally.

#### Peterborough Ware

Figure 2.13 above shows the general distribution of Peterborough Ware pottery across the Terminal 5 site. The absence of this pottery from the Perry Oaks excavations has been discussed previously, and this section will look at the context of deposition of this pottery where recovered at Terminal 5.

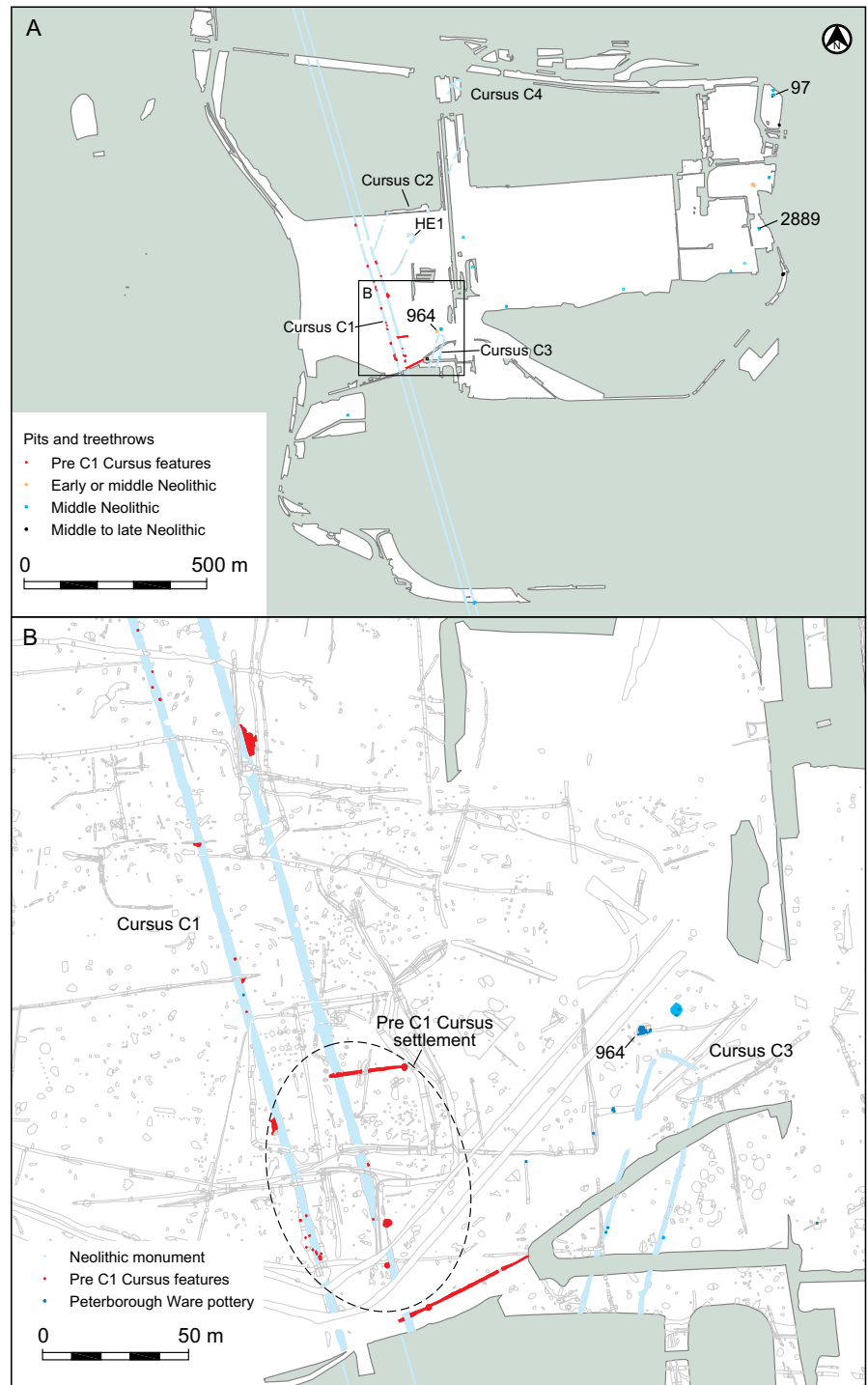


Figure 2.52: Distribution of Early or Middle, Middle and Middle or Late Neolithic pits and tree-throws (c 3400 to 2000 BC)

We have already seen how Peterborough Ware pottery was recovered from the middle and upper fills of the C1 Stanwell Cursus, and was also present in very small quantities in the C3 Cursus, while the dominant context of deposition of Peterborough Ware at Terminal 5 is pits. It was also recovered from the upper fills of the Yeoveney Lodge Causewayed enclosure

(Robertson-Mckay, 1987, 16). This pattern of secondary deposition in earlier monuments and in contemporary pits has been noted previously by others (eg Thomas 1991, 90–2; 1999, 109–11 and Cotton with Johnson 2004, 145).

Figure 2.52 shows the distribution of pits and tree-throws dating to the period from c 3400 to 2000 BC. If we



Plate 2.21: View of excavated pit complex 964 from the NE

examine the pits containing Peterborough Ware at Terminal 5, we can see that they occur either as individual isolated features, or as clusters of inter-cutting pits. The latter category is represented by three main clusters: (964, 97 and 2889; Fig. 2.52).

Entity 964 consists of a very complex sequence of inter-cutting pits (527117, 527135, 527142 and 527124) located 8 m to the north-west of the north-western 'entrance' into the C3 Cursus (Fig. 2.53; Plate 2.21). A large (approximately 5 m diameter) sub-oval depression was excavated first (527117). A series of inter-cutting pits (527135, 527142 and 527124 in ascending stratigraphic order) was then excavated through the shallow depression 527117. The lower fills of these three pits contained Plain Bowl pottery and flintwork, as well as fragments of saddle quern. The whole complex was then sealed by a series of fills that contained large quantities of Peterborough Ware pottery (Plate 2.22). Regarding the querns:

*...traditions in saddle quern usage and choice of materials for making them tended to be very conservative, in contrast to the ever changing styles of pottery, flintwork and other artefacts, and these finds from Terminal 5 are very similar to Early Neolithic ones from the Eton Rowing Lake and adjacent sites (Roe, in prep (a)). Here too sarsen quern fragments tended to be burnt. Grinding surfaces prepared by pecking were typical, but some were also worn smooth. A suggested source for this sarsen was Chobham Common, but formerly sarsen blocks must have been more plentiful in the area generally (Dewey and Bromehead 1915, 58).*

(Roe, CD Section 7)

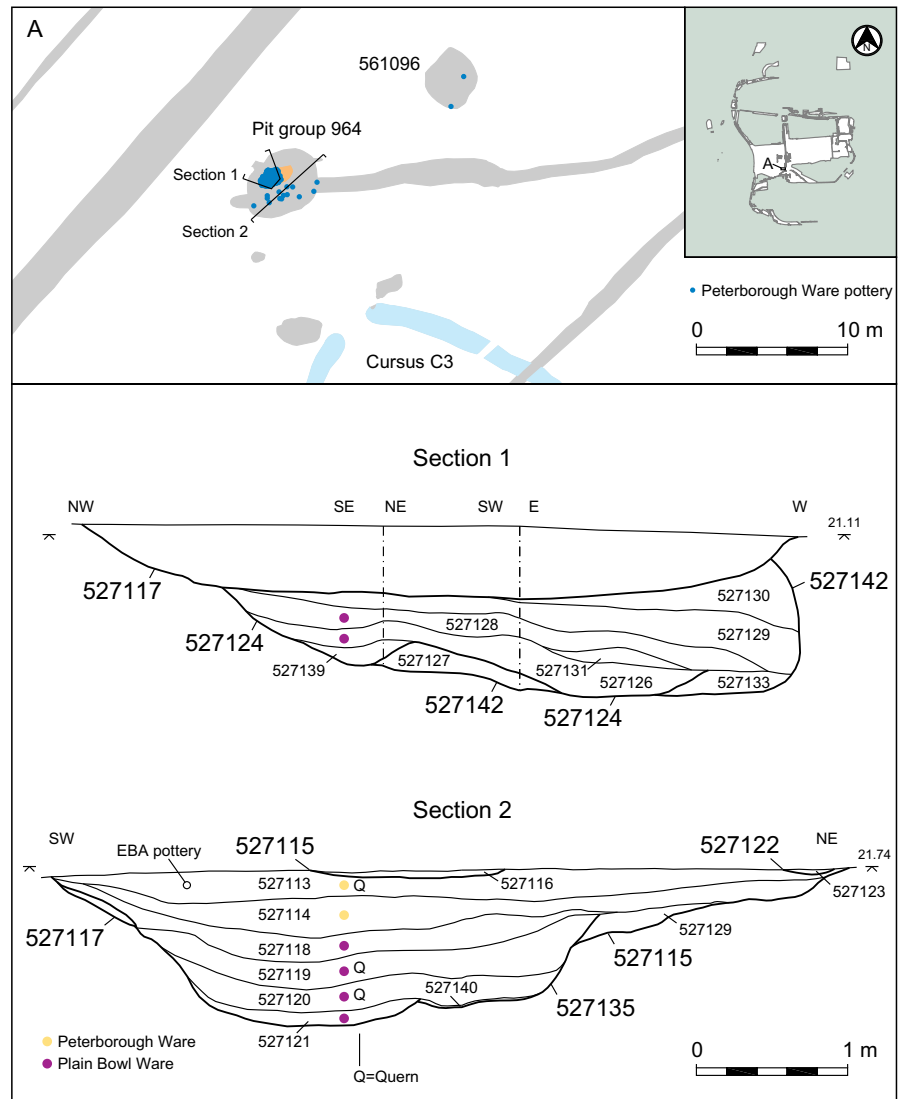


Figure 2.53: Pit group 964

The pottery from this pit sequence probably represents a series of depositional events, with the earlier Plain Bowl Ware possibly overlapping in use with Peterborough Ware from the upper layers. This Peterborough Ware consisted of:

*...fragments of four vessels. One (in FL20) was represented by a single sherd with fingernail impressions on the oxidised exterior, while a second necked sherd in the same fabric had a smoothed exterior decorated with rows of impressions below the neck possibly made with the end of a bird bone. The other two vessels were present in much larger quantities: 69 sherds of a vessel in FL21 included some with fingernail impressions, and one with a row of twisted cord either side of a blank 'panel'. The three rim sherds from this vessel were 'T'-sectioned and flat topped, with the top, outer and inner surfaces all*

*decorated with fingernail impressions. On the inner surface these were between raised ridges. The fourth vessel was represented by 138 sherds in FL22. Some sherds were plain, while others had fingernail decoration. The rim was an elaborate 'T'-shape, with fingernail and stick or bird bone impressions.*

(Leivers et al., CD Section 1)



Plate 2.22: Peterborough Ware sherds in-situ within pit complex 964

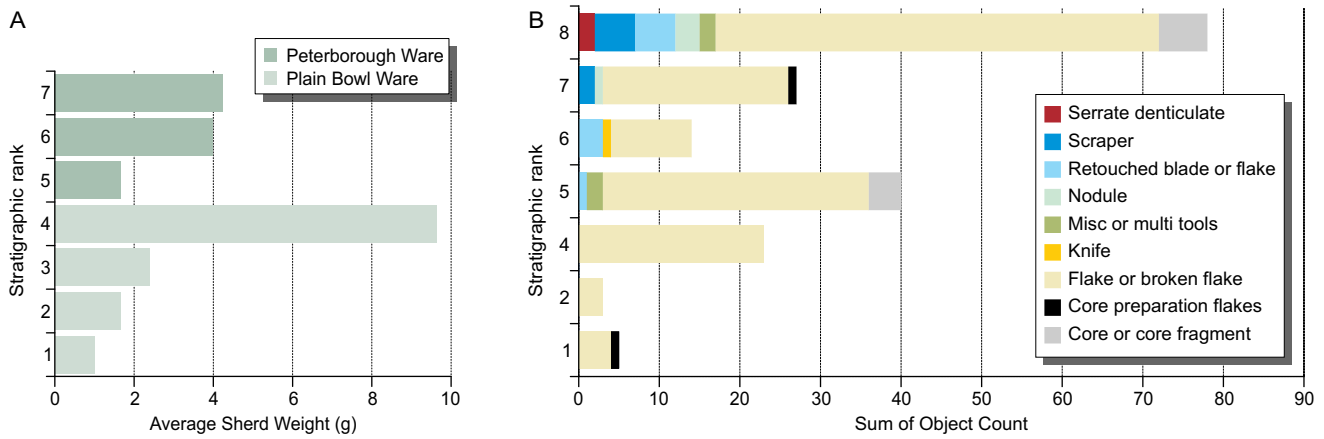


Figure 2.54: A : Average sherd weight by stratigraphic rank of deposit within pit complex 964 B: Composition of lithic assemblage by stratigraphic rank of deposit within pit complex 964

The flintwork, Plain Bowl pottery and quernstone fragments from the lower fills of the intercutting pits all suggest a domestic origin for this material which is probably linked to the possible domestic settlement pre-dating the C1 Cursus in Area 49. Although domestic in origin, it may be that the deposition of this material in the pits was associated with ceremonies enacted at the C3 Cursus, which as we have seen, is a mere 8 m away. The concentration of pottery and flint in the north-western part of the C3 Cursus has already been commented on, and suggests that activity associated with the pit complex and the cursus was broadly, if not exactly contemporary.

Table 2.16 quantifies the pottery assemblage by the stratigraphic rank of the deposits within pit complex 964. It is clear that much greater quantities of Peterborough Ware were being deposited than Plain Bowl Ware. Figure 2.54(A) shows the average sherd weight for Peterborough and Plain Bowl Ware (derived from Table 2.16) by stratigraphic rank of deposit (lowest

at the bottom). This shows a more complex picture. The lowest deposits (ranks 1–3) contain, on average, small sherds of Plain Bowl Ware, consistent with their origin as domestic refuse. The large increase in average sherd size in rank 4 suggests a far more selective and deliberate depositional process. One explanation for this is that it coincides with the construction of the C1 Stanwell Cursus, which obliterates the location of the settlement. The deposition of this material may therefore be a closing act to symbolise the abandonment of the settlement and the incorporation of its location into the C1 Cursus. It could also serve to mark the construction of the C3 Cursus, or at least this northern extension of the monument.

Following this event, the re-cut pit complex became the receptacle for Peterborough Ware, initially in very small quantities, but by ranks six and seven in much larger quantities. The average sherd size of Peterborough Ware is larger than the Plain Bowl Ware of ranks 1–3, hinting at greater

selection and deliberate deposition of the material. This is confirmed by the limited number of vessels that were deposited. This shows that this location continued to be of importance, and was reinforced by selective deposition of material. The overall stratigraphic pattern of deposition of pottery in this pit complex is similar to that of monuments (eg see Fig. 2.39 above). Perhaps we can think of the origin of this pit complex in terms of the use of domestic settlement material to reinforce a claim to land. This use was ended with the construction of the cursus monument(s), but the adoption of Peterborough Ware saw the location reverting to being the scene of deposition, this time of more purposeful deposition of particular pottery associated with or produced for specific ceremonies enacted within a monumental landscape, rather than collections of domestic rubbish. Figure 2.54(B) shows that the flint assemblage associated with Plain Bowl deposition consists entirely of debitage (waste blades and flake and core preparation pierces). The flint assemblage

SG rank	EBA Beaker or Collared Urn		E Neo Plain Bowl Ware		M Neo Peterborough Ware - Mortlake		Total Weight (g)	Total No. of Objects
	Weight (g)	No. of Objects	Weight (g)	No. of Objects	Weight (g)	No. of Objects		
8	14	2	-	-	708	167	722	169
7	-	-	-	-	167	42	167	42
6	-	-	-	-	10	6	10	6
5	-	-	299	31	-	-	299	31
4	-	-	24	10	-	-	24	10
2	-	-	5	3	-	-	5	3
1	-	-	1	1	-	-	1	1
<b>Total</b>	<b>14</b>	<b>2</b>	<b>329</b>	<b>45</b>	<b>885</b>	<b>215</b>	<b>1228</b>	<b>262</b>

Table 2.16: Weight and count of pottery by stratigraphic rank from pit complex 964

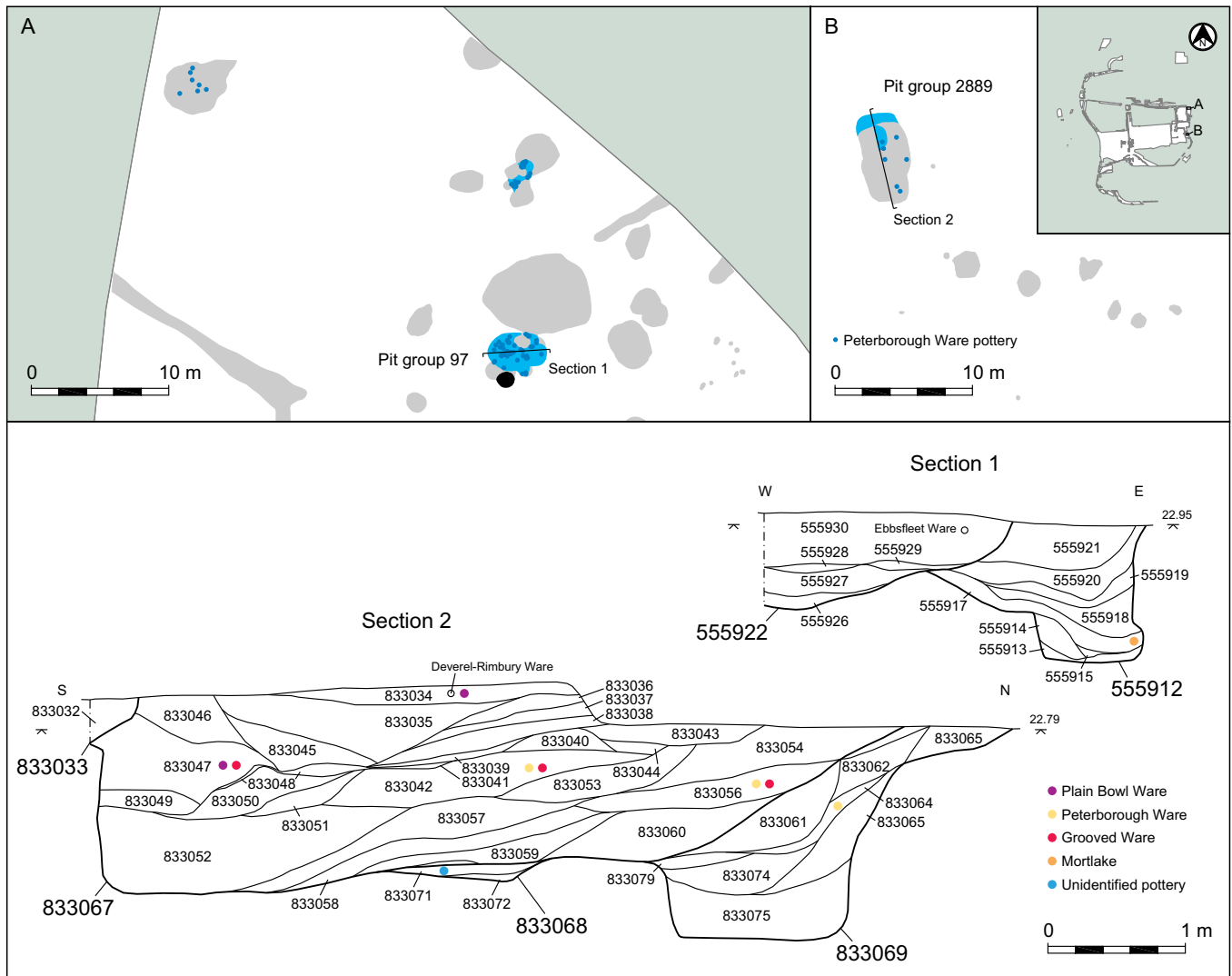


Figure 2.55: Pit groups 97 and 2889

associated with Peterborough Ware is more varied, and contains scrapers, awls and other retouched tools. We would argue that this represents selection of certain elements of the lithic tool kit for inclusion in ceremonies and ultimately deposition in the pit complex.

We believe this exemplifies a change in the pattern of deposition between that of Plain Bowl Ware and Peterborough Ware, and that this trajectory continued through the 3rd millennium and is developed further with the adoption of Grooved Ware.

Whilst there are several other pits and tree-throws which appear to be contemporary with the deposition of Peterborough Ware between *c* 3400 and 2500 BC, only two further examples will be discussed in any detail.

Entity 2889 is located at the far eastern side of the site in Area 99 (Fig. 2.55) and consists of three features, 833067, 833068 and 833069, with 833069 cutting the other two. Pit 833068 contained a few scraps of unidentifiable pottery (but which could be Plain Bowl Ware) and a few flint flakes. Pit 833069 contained 1 sherd of Ebbsfleet style Peterborough Ware. Both 833068 and 833069 were cut (and almost totally removed) by a large (approximately 6.5 m long and 0.75 m deep) pit or 'waterhole' (833067). This feature contained a complex sequence of fills, and had obviously undergone a long period of silting. The fills contained flint flakes, cores and scrapers, Plain Bowl Ware and Mortlake style Peterborough Ware, but also Late Neolithic Grooved Ware and even Deverel-Rimbury and post-Deverel-Rimbury Bronze Age pottery. The date for this feature is thus

open to question, but it could conceivably belong to the late 2nd millennium BC, since the Peterborough Ware and Plain Bowl Ware probably derives from the earlier pits, and the Bronze Age pottery was from the very highest fill and probably intrusive. It would appear that here we have a location where deposition of Plain Bowl Ware in a pit was probably quickly followed by the digging of another pit to accept Ebbsfleet Ware, and then both were truncated by a large feature containing Grooved Ware. Unfortunately the number of sherds and weights for the Plain Bowl, Peterborough and Grooved Ware assemblages from this complex were not large enough to provide meaningful comparisons.

Another complex of intercutting pits (97) was located 370 m to the NNE of Entity 2889 (Fig. 2.55).

Pit 555922 contained 40 sherds of an Ebbsfleet-type bowl, heavily encrusted with residues. With the exception of a very small number of featureless sherds, this Ebbsfleet vessel is the only instance of fabric FL23, suggesting that—while no doubt contemporary with the other Peterborough Ware styles—Ebbsfleet-type vessels do form a distinct sub-set of Peterborough ceramics. The vessel was represented by 32 body, five rim and three shoulder sherds, with fingernail impressions on the body (the sherds are abraded and many obscured with a heavy deposit, but some at least have all-over decoration), above the shoulder in the neck and on top of rim.

(Leivers et al., CD Section 1)

A total of 878 g of Peterborough Ware was recovered from pit 555922 with an average sherd weight of 21.4 g. This is far in excess of the average sherd weight in Figure 2.54, and strongly suggests that the pottery was not a dump of domestic refuse.

### Grooved Ware

As we have already discussed, there is a potential chronological overlap in the use of Grooved Ware and Peterborough Ware between 3200 BC and 2500 BC, and this uncertainty is compounded by the scarcity of reliable radiocarbon dates for either style of pottery from the Middle Thames Valley. It is worth noting that at Terminal 5, apart from the few sherds

Feature	Interpretation	No. Sherds	Weight (g)
127022	Pit	5	5
216121	Pit	41	134
517191	Pit	8	20
528117	Ring Ditch	7	25
531011	Pit	97	158
561104	Pit	2	84
580310	Pit	14	226
685019	Pit	4	13
695027	Pit	84	373
695058	Pit	10	28
708007	Pit	115	680
820018	Tree-throw	4	10
827269	Pit	4	27
833067	Waterhole	9	17
836009	Pit	96	275

Table 2.17: Late Neolithic features containing Grooved Ware pottery

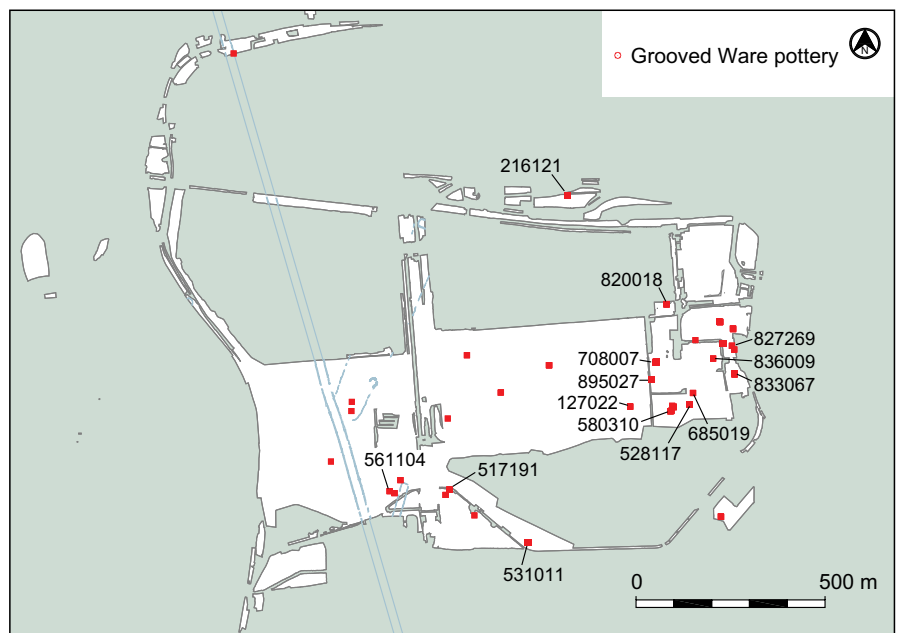


Figure 2.56: Distribution of Grooved Ware pottery

of Grooved Ware and Peterborough Ware recovered from the HE2 Enclosure and the possible intercutting pit sequence on Area 99 (2889; see above), the two types of pottery are not generally found associated. This contrasts with the relationship with Plain Bowl and Peterborough Ware pottery, where the latter is often a later addition to either the upper fills of an earlier monument or pit sequence (for example the C1 Cursus and pit complex 964). This may suggest a clearer chronological separation between the use of Grooved Ware and Peterborough Ware than between the latter and Plain Bowl pottery at Terminal 5. For the purposes of this volume, and in the absence of reliable radiocarbon dates, we will treat the use of Grooved Ware as chronologically later than Peterborough Ware.

Every and Mephram identified the Perry Oaks Grooved Ware as a significant addition to the rather scanty ceramic record for the Late Neolithic in the West London area (2006, 7). At the time of the first stage of analysis, all of the identifiable vessels belonged to the Durrington Walls type, and the addition of a Clacton tub and—especially—a possible Durrington Walls/Woodlands hybrid increases the importance of this material still further. Previous finds in the area (including over 500 sherds from Holloway Lane, Harmondsworth (Cotton et al. 1986, 36

and fig. 22b; Field and Cotton 1987; Merriman 1990, 24–5); 120 sherds from at least three vessels in a hollow at Prospect Park, Harmondsworth (Laidlaw and Mephram 1996); an unspecified quantity of material from a feature at Sipson Lane, Harmondsworth (Longworth and Cleal 1999, 185); two sherds from a ring ditch at West Bedfont (ibid.) and fragments of a burnt vessel from Lower Mill Farm, Stanwell (Jones and Ayres 2004)) belong to the Durrington Walls, Clacton and Woodlands types.

Unlike the Peterborough Wares, the Grooved Ware sub-styles tend to merge into one another, so an instance such as the vessel in pit 580310 is not atypical. Although the sub-styles show no real regional or chronological cohesion, the different sorts of vessel were often used in different ways. Woodlands-style pots are predominantly found in pits, as at Heathrow. Durrington Walls-style vessels are found in a variety of contexts, including ring ditches and the large Wessex henges, but also in isolated pits. Given this, in spite of its scarcity in the region, Grooved Ware seems to have been fulfilling the same roles as in areas where it was in more common use.

In this light, the Heathrow material could be regarded as typical deliberate deposits within isolated features. On the other hand, the fair to heavy abrasion on some sherd groups could be indicative of

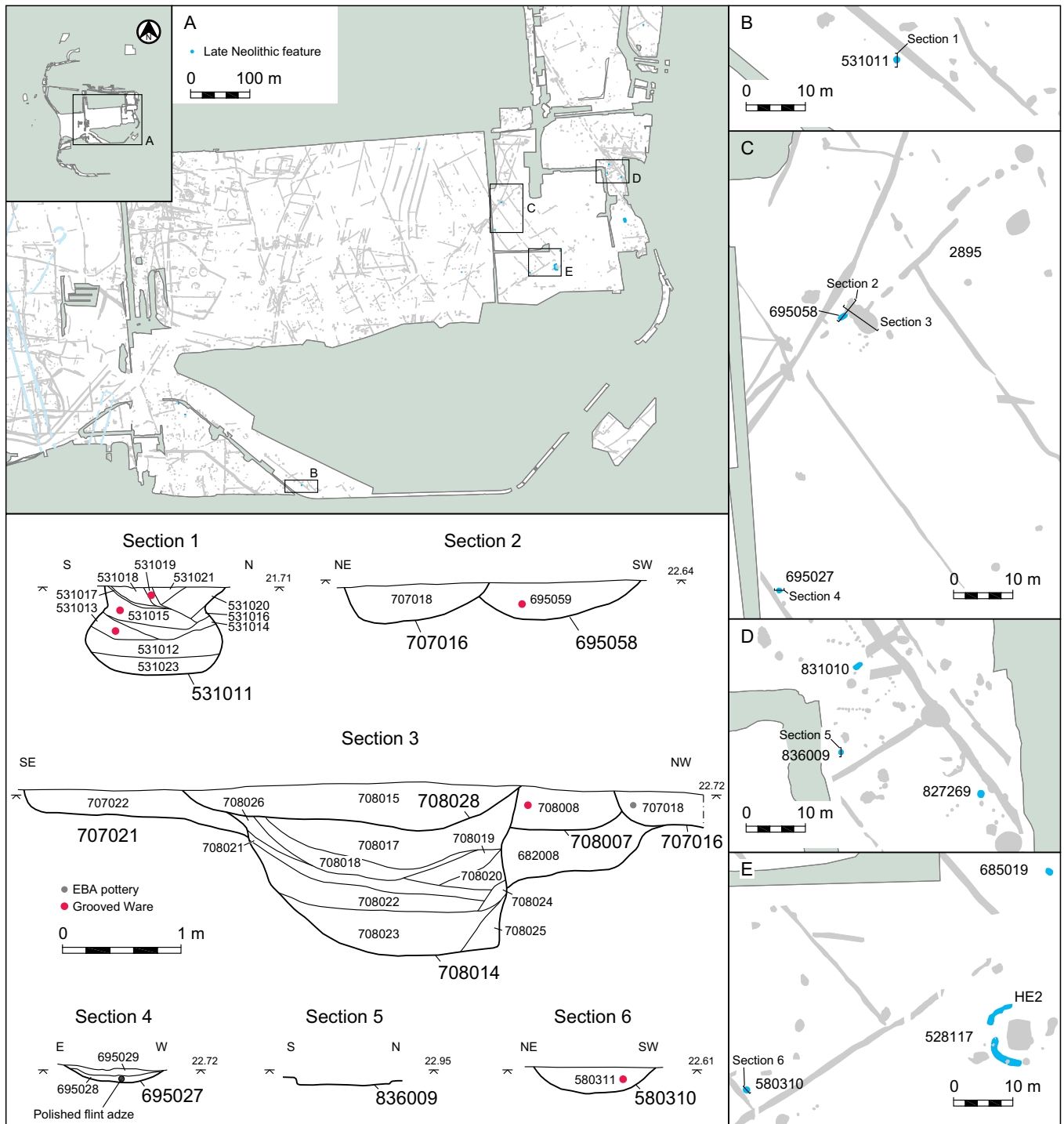


Figure 2.57: Features associated with Grooved Ware pottery

*pre-depositional use or post-depositional movement, with the more fragmented vessels perhaps entering the pits as a result of erosion of the surrounding topsoil.*

*(Leivers et al., CD Section 1)*

Figure 2.56 shows the distribution of Grooved Ware pottery, and it is evident that when compared with the distribution of features which can be dated confidently as being contemporary

with the use of this pottery, much of the material resides in later contexts.

Table 2.17 shows the limited number of features depicted in Figure 2.56. Apart from the HE2 ring ditch, it is clear that most of the features associated with Grooved Ware are pits, a very common phenomenon with this type of pottery (eg Garwood 1999, Illus. 15.4). We will firstly describe some of the pits, before examining the HE2 Enclosure.

### Grooved Ware pits

Two of the pits containing Grooved Ware (216121 and 127022) have been discussed in detail in volume 1 (Framework Archaeology 2006, 82–3, fig. 2.26). We will now describe briefly a number of others from Terminal 5 (see Figs 2.56–7).



Plate 2.23: Pit 836009

#### Pit 836009

Pit 836009 survived as a very shallow depression (Fig. 2.57, section 5; Plate 2.23), probably representing the base of an originally deeper feature. It contained 96 sherds (275 g) placed against the western edge of the feature. The sherds formed 65% of the rim of a vessel 280 mm in diameter. This vessel most probably belongs to the Clacton type. An oblique arrowhead and a retouched blade/flake were also retrieved from this pit.

#### Pit 580310

*Pit 580310 (Fig. 2.57, section 6) contained large rim sherds from a pair of vessels in a variant of GR2, the form and decoration of which indicate the Woodlands sub-style. Both have sinuous raised cordons with slash-marks. At points along these cordons on one vessel (in one instance at the convergence of two cordons) are larger impressions apparently made with a finger end – these may replicate the more elaborate applied ‘stops’ at the convergence of cordons on more typical Woodlands vessels. The atypical feature of these sherds is the presence of two lines of twisted cord impressions below the rim of one, suggesting a Woodlands/Durrington Walls hybrid.*

*(Leivers et al., CD Section 1)*

#### Pit 531011

*...97 sherds from three vessels in GR5 were recovered from pit 531011... All were burnt and extremely friable. Another sizeable group came from pit 216009/216118 (41 sherds: 134 g)... Diagnostic sherds include part of the rim with horizontal grooved decoration below. This appears to be a relatively thin-walled, bucket-shaped*

*vessel, with a simple rounded rim. Form and decoration are sufficient to assign this vessel to the Durrington Walls sub-style.*

*The majority of the identifiable vessels belong to this same sub-style (Wainwright and Longworth 1971, 240–2). Here, the characteristic traits are whipped and twisted cord; internally-bevelled and concave rims, often with incised decoration below; vertical plain cordons and external incised or grooved decoration. Much of the material derives from a series of closed vessels, although very few profiles can be reconstructed. In addition to those already described, a further 10 sherds with grooved decoration from other contexts (pits 127022, 141228, 170007; ditches 146205 and 961747) are also probably of the same sub-style, although too small to make a definitive identification. The remaining sherds are plain and undiagnostic.*

*(Leivers et al., CD Section 1)*



Plate 2.24: Pottery in pit 531011

*531011 contained 213 struck flints in 11 deposits... Burnt unworked flint came from ten deposits... The flintwork is almost certainly contemporary with the Grooved Ware pottery with which it was found. The assemblage is in a very fresh, uncorticated condition and is composed mainly of unretouched flakes (121 pieces), some of which approach bladelike dimensions. Most of the flakes are rather small; cores and larger elements of waste are virtually absent, although the presence of 69 chips suggests that some knapping activity was performed nearby. The percussion mode seems to have been mixed with a slightly greater representation of hard-hammer use; platform edge abrasion was occasionally employed.*

*A few utilised edges were noted along with a range of retouched tools, including five retouched flakes, one end scraper and three piercers, including one example made on a blade. Context 531017 contained a*

*retouched tool with a piercing point at the proximal end and some truncated scraper-style retouch along the distal end. Two multi-platform flake cores were also recovered, along with one core on a flake. A group of 20 flakes have been heavily burnt to a similar degree, perhaps in the same event; all are calcined grey-white.*

*Most of the flakes seem to derive from five or six individual cores, but each core is represented by a very small selection of flakes and only one knapping refit was found. A single flake of bullhead flint is also present, which could not be related to any other piece within the assemblage and appears to be an isolated example. The assemblage seems to represent an accumulation of utilised flakes and tools from a range of different activities. Many of these pieces seem to have been struck from the same core, which might indicate a relatively short interval between production, use and discard. Other pieces, such as the bullhead flake, are single occurrences and may have been in wider circulation before deposition.*

*(Cramp and Leivers, CD Section 4)*

#### Pit 708007

*Pit 708007 (in Pit Group 821; Fig. 2.57, section 3; Plate 2.25) contained a pair of vessels in its single fill, in GR5 (76 sherds) and GR2 (48 sherds) (see below).*



Plate 2.25: Pit 708007

*This [worked flint] assemblage of 35 pieces [from pit 708007] is in exceptionally fresh condition. The debitage consists entirely of secondary and tertiary flakes, but the assemblage is dominated by tools, including some deliberately broken pieces: a notched scraper and two additional retouched flakes that appear to have been deliberately snapped. Another probable flake from a scraper on a non-flake blank was also recovered (again, snapped)— alternatively this piece may be an inversely*

retouched scraper on a preparatory flake with thermal dorsal surface. In total, eight scrapers were recovered.

Other tools included three piercers, a serrated flake and a pair of backed knives. This assemblage is unusual for the very high proportion of use-wear and, particularly, retouch. The ceramic associations are Grooved Ware, and this assemblage bears comparison with that from Grooved Ware pit 827269, especially in terms of the pair of knives.

(Cramp and Leivers, CD Section 4)

### Pit 695027

Pit 695027 (Fig. 2.57, section 4; Plate 2.26) contained eight small sherds from two vessels in its lower fill, one in GR2 (61 sherds) and one in GR5 (19 sherds). It is possible that the sherds in pits 695027 and 780007 derive from the same pair of vessels; those in 695027 are in markedly better condition than those in 708007, which was cut by Early Bronze Age feature 707016. Eleven pieces of struck flint came from this pit, including a complete polished flint axe.



Plate 2.26: Pit 695027

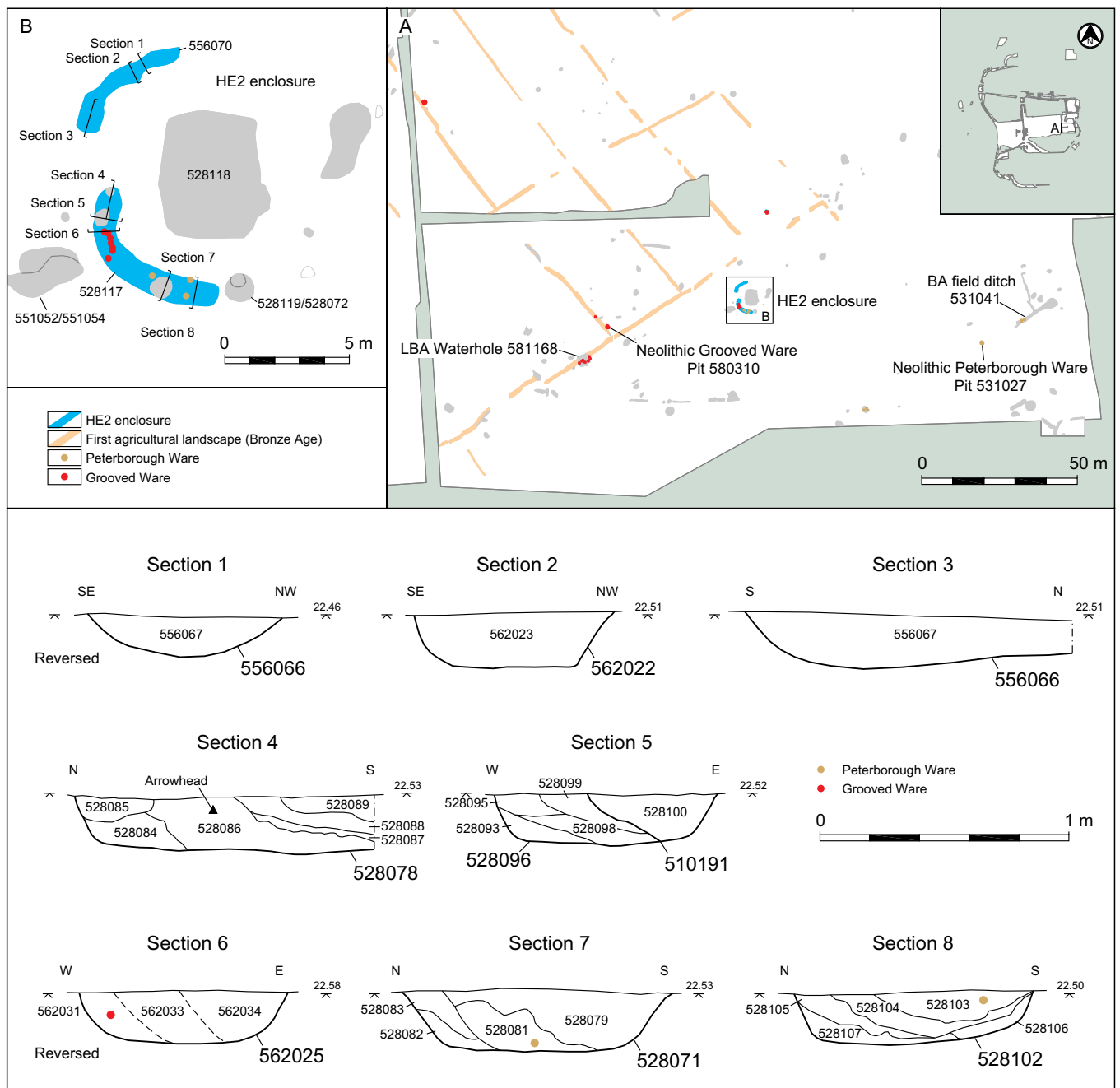


Figure 2.58: HE2 Enclosure: excavated sections and pottery distributions





Plate 2.27: Horse Shoe Enclosure 2 (HE2)

### The HE2 Enclosure

Horseshoe Enclosure 2 (HE2) was situated in Area 77 towards the south-eastern extremity of the main Terminal 5 excavation area (Fig. 2.58; Plate 2.27). Before describing the monument it is important to realise that it is likely that truncation associated with the Sludge Works probably destroyed any shallow features which may have formed the eastern part of the circumference of this enclosure. Truncation also rendered the surviving features difficult to excavate and interpret due to their shallow nature. Nonetheless, it is clear that the HE2 monument is approximately half the diameter of the HE1 enclosure, and is probably later than it.

### Form and stratigraphy

The monument survives as two short, curving lengths of ditch (528117 and 556070). If these are projected to the east, then they would form an enclosure approximately 10 m in diameter. However, the surviving monument is completely open on the eastern side, and to the west there is a gap of 2.28 m between the ditches, which probably formed an original entrance (Fig. 2.58).

The southern ditch (528117) is 7.3 m long, 1 m wide and 0.2–0.3 m deep with a steep sided 'U' shaped profile. The northern ditch (556070) is 5.4 m long, between 0.6 and 1 m wide and 0.2 m deep, with a more rounded 'U'

shaped profile. The southern ditch contains a distinctive series of gravel rich deposits, indicating the slumping of an internal bank or mound into the ditch (Plate 2.28). In contrast, the northern ditch contains a single fill, mostly composed of silty brick-earth.

Several other features in the immediate vicinity may, with varying degrees of certainty, have been connected with the HE2 monument, whilst others proved to be natural features. For example, 528118 was revealed to be a large natural deposit of brickearth in the 'centre' of the HE2 enclosure. Two intercutting features (551052 and 551054) to the west of the monument were interpreted as pits but their form was very irregular, while features 528119 and 528072 were interpreted as a natural hollow (528119) cut by a pit (528072). There is insufficient evidence to link any of these features with the HE2 Enclosure.

### What did the monument look like?

The effects of truncation, and in particular the uncertainty concerning the possibility of a continuation of the ditch circuit in the east makes reconstructing the original architecture of the monument very difficult. There is clear evidence of a slumping of gravel from the northern side of the southern ditch (528117), though whether this derived from a bank or mound is unclear. The central patch of brickearth (528118) surviving in a slight hollow in the gravel could indicate either a bank or mound. In the case of the former, the denuded gravel area between the brickearth deposit and the northern and southern ditches may represent the positions of the internal banks. In the case of the latter, the mound may have acted to preserve the brickearth deposit from later truncation.

The absence of similar decayed bank deposits from the northern ditch (556070) suggests either that this is not contemporary with the southern ditch, that the bank or mound was closer to the southern ditch, or that the bank or mound was deliberately demolished and pushed into the southern ditch. Unfortunately none of these



Plate 2.28: Gravel tip in terminus of southern ditch of HE2 Enclosure

possibilities can be determined with certainty. In the light of this uncertainty, we will not speculate further on the size of any internal structure.

### *When was the monument built?*

The dating evidence for the construction of the HE2 monument is very tenuous and contradictory. The northern ditch contained seven largely undiagnostic flakes and spalls, while the southern ditch is more complicated, and the interpretations expressed here are based on the original excavation records.



Plate 2.29: Grooved Ware in southern ditch of HE2 Enclosure

The main chronological indicators are three sherds of Peterborough Ware and seven sherds of Grooved Ware pottery (Plate 2.29). The Peterborough Ware pottery was located in interventions 528102 and 528071. In the latter intervention, a single sherd of Peterborough Ware was retrieved from deposit 528128 (context 528081; Fig. 2.58 Section 7) which represents the slumping into the ditch of the internal bank/mound discussed above. In intervention 528102, two sherds of Peterborough Ware were retrieved from deposit 510195 (context 528103; Fig. 2.58 Section 8) which represents the more gradual silting of the ditch following the slumping of the internal bank/mound. In contrast, the seven sherds of Grooved Ware in intervention 562025 are all from deposit 562031 (Fig. 2.58 Section 6), the initial silting of the ditch sides, prior to the slumping of the bank (represented by deposit 562033). Although the bank slumping deposit is not as clear in this interven-

tion, and the excavator made the point that the exact context of the pottery was difficult to define, the geo-referenced photographs of a Grooved Ware sherd seem to confirm it originated in the upper part of context 562031.

If this interpretation of the stratigraphy and pottery sequence is correct, then it would imply an inverse stratigraphy, with Grooved Ware dating to the period 3000 to 2000 BC stratified beneath Peterborough Ware, dating to the period 3400 to 2500 BC. Whilst the chronological overlap of the two types of Pottery may explain this, there is another explanation. This requires that the HE2 monument was constructed in the 3rd millennium BC, and was associated with the use of Grooved Ware pottery. The Peterborough Ware pottery becomes incorporated in the fills once the monument starts to decay and the ditch fills in as it is already present in the landscape, either as debris from occupation or ritual activity. The Peterborough Ware can therefore be viewed as earlier pottery residing in a later context. The only other diagnostic artefact was a chisel arrowhead from a stony in-wash fill (context 528086; Fig. 2.58 Section 4) in the northern terminal of the ditch. Unfortunately this type of arrowhead is associated with both Peterborough Ware and Grooved Ware pottery.

Figure 2.58 also shows the distribution of Peterborough Ware and Grooved Ware in the area around the HE2 Enclosure, and it can be seen that there is a relatively significant quantity of both pottery types from features in the area. Some reside in later features such as the 2nd millennium field ditches, but others lay in pits and possible tree-throws which can reasonably be treated as contemporary with the pottery. For example, approximately 53 m to the SSW of the HE2 monument, there are a handful of Grooved Ware sherds in Late Bronze Age waterhole 581168. These probably originated from activity associated with the excavation in the 3rd millennium BC of a small pit (580310) located approximately 10 m to the north-east, which contained Grooved Ware. Similarly, the few sherds of Peterborough Ware in

the Bronze Age field ditch 531041 located 85 m to the ESE of the HE2 Enclosure are probably derived from activity in the late 4th or early 3rd millennium BC that was associated with the deposition of Peterborough Ware sherds in pit 531027.

In summary, the monument can be interpreted as being constructed sometime in the 3rd millennium BC and was associated with the use of Grooved Ware pottery. The bank collapse probably occurred fairly rapidly after construction, leaving a more stable form of the monument. The collapse and stabilisation deposits of the monument included Peterborough Ware relating to a (probably chronologically) separate phase of activity in the vicinity of the monument.

### *Evidence for the wider landscape in the 3rd millennium BC*

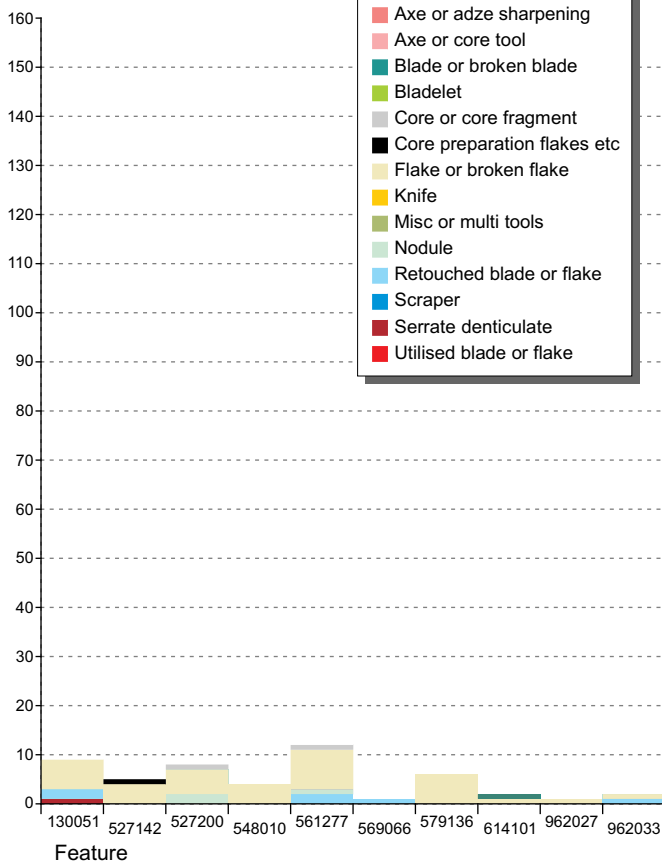
In the West London area, Peterborough Ware was deposited in three main contexts. Firstly, isolated or small clusters of pits, often with lithic material and charcoal. Secondly, from the upper fills of causewayed enclosures (eg Yeoveney Lodge Staines; Robertson-Mckay 1987) and the Stanwell Cursus (O'Connell 1990). Thirdly, Peterborough Ware is often associated with the modification of earlier Neolithic small circular monuments. Examples include Manor Farm Horton (Preston 2003) and Staines Road, Shepperton (Bird *et al.* 1990).

Taken together, the three main contextual occurrences of Peterborough Ware give the impression of a time when people inhabited a landscape defined by ancient places and relatively new monuments and practices. The existing large monuments continued in use in some way, even if they were in advanced decay, whilst others were modified and / or enlarged. For example, the Peterborough Ware pottery in the middle and upper fills of the C1 Stanwell Cursus suggests the

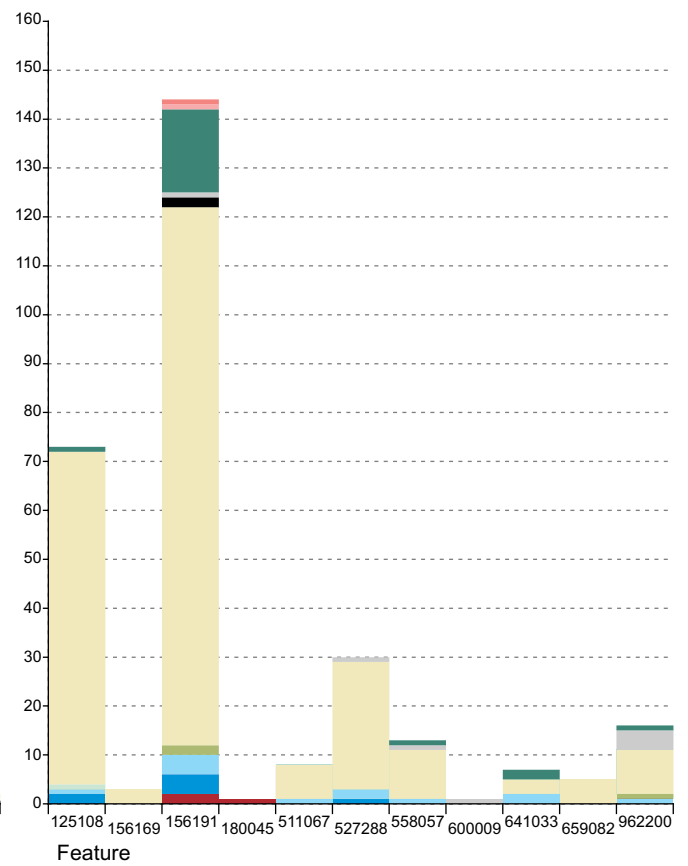
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*Figure 2.59: Lithic assemblage composition from Plain Bowl tree-throws and pits, and Peterborough Ware and Grooved Ware pits*

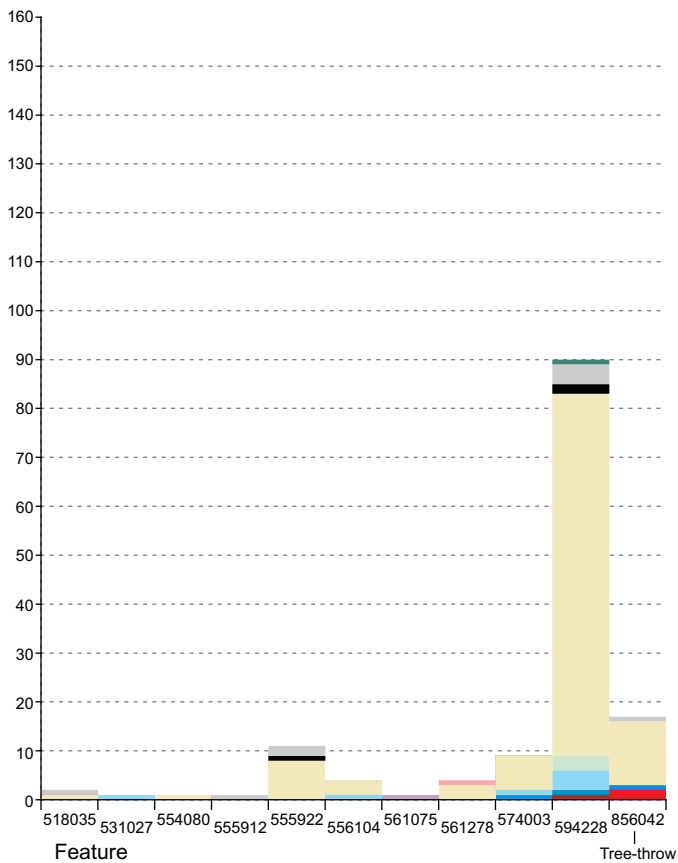
**A Plain Bowl Ware pits**  
Number of artefacts



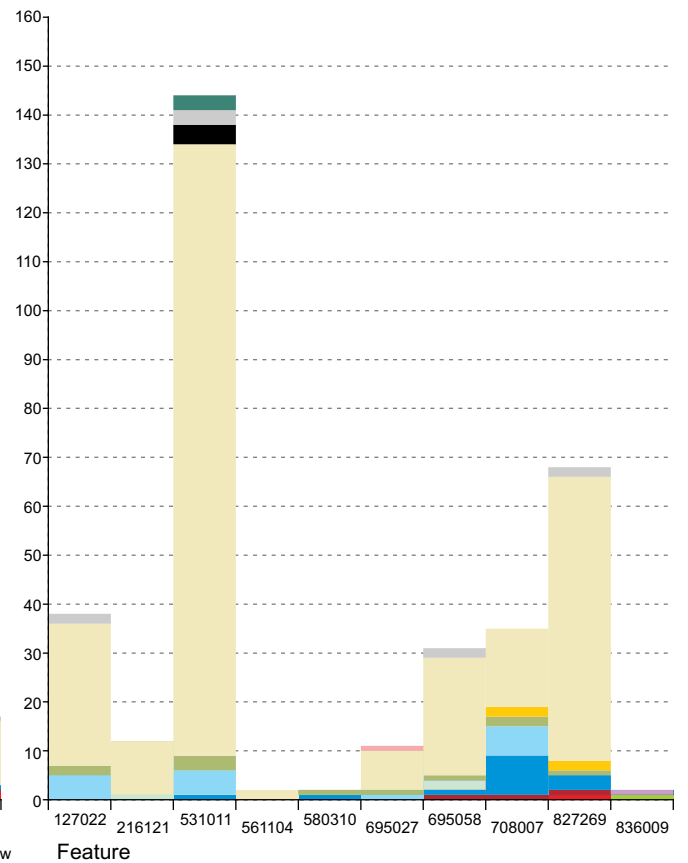
**B Plain Bowl Ware tree-throw**  
Number of artefacts



**C Peterborough Ware pits and tree-throw**  
Number of artefacts



**D Grooved Ware pits**  
Number of artefacts



Date Span	Feature Type	Total Assemblage		Retouched Tool Assemblage	
		Quantity	Composition	Quantity	Composition
3000 - 2000 BC	Grooved Ware pits	Larger quantity of material, with few exceptions of less than 10 pieces.	Varied composition, whole reduction sequence represented.	Comparatively large quantity.	Varied composition, with scrapers and retouched blades/flakes most prevalent. Miscellaneous tools also well represented. Most pits have more than one category.
3400 - 2500 BC	Peterborough Ware pits and 1 tree-throw	Very low quantities with a few exceptions.	Varied composition, 11 object categories represented. Whole core reduction sequence represented.	Very low quantities with one exception.	More varied composition, with 5 object categories. Scrapers and retouched blades/flakes most prevalent. Most pits have only one object category.
c. 4000 - 3300 BC	Early Neolithic Pits (Plain Bowl Ware)	Very low quantities with no exceptions.	Composition restricted, only 7 object categories represented. Debitage dominated assemblages.	Very low quantities.	Very restricted composition, only 1 serrated, and the remainder consists of retouched blade/flakes. Most pits have only one object category.
c. 4000 - 3300 BC	Early Neolithic tree-throws (Plain Bowl Ware)	Low quantities with some clear exceptions.	Composition quite varied, 12 object categories represented. Whole core reduction and tool production sequence represented. Even small assemblages show variety.	Low quantities with one exception.	Fairly varied composition, with 7 object categories. Scrapers and retouched blades/flakes most prevalent. Half the tree-throws have only one object category.

Table 2.18: Comparison of lithic assemblages and retouched tool assemblages from Plain Bowl tree-throws and pits, and Peterborough Ware and Grooved Ware pits

monument was still being used in some form, and may even have been associated with the activity that produced the postholes that cut the lower fills of the ditches at some locations. The excavation of the pit (524398) containing Peterborough Ware, and the possible additional length of western ditch on Area 28, also suggests some localised modification and addition to the monument. Elsewhere in this part of the Middle Thames we have mentioned the ring ditch at Staines Road Farm, Shepperton which was associated with Peterborough Ware and seems to have been used for burial. Even closer to Terminal 5, the inner ditch of the Horton monument was encircled with an outer enclosure, again associated with Peterborough Ware. To the north-east of Terminal 5, two ring ditches (one a double ditched monument) each contained a cremation at the centre which dated to c 3000 BC (Crockett 2001; A. Barclay pers. comm.). These dates fall firmly within the currency of Peterborough Ware.

It would appear then that older communal monuments, such as the causewayed enclosure at Staines and the Terminal 5 cursus complex, remained a part of the everyday life of the community. New, small circular monuments (or in the case of Horton, additions to earlier types) appear to have included

funerary practices amongst other ceremonies that may have been performed at these locations. Thus the monuments, old and new, continued to provide the locations and architectural setting for the ceremonial 'glue' that held the community together.

If we are to try to understand this trend beyond ascribing it to ritual practices, we should consider how people moved around a landscape divided by monuments and tradition—how they decided where people would live, graze animals, gain access to water and plant crops. By whatever process, these issues had to be resolved and settled, perhaps every year or season. We have already suggested that the cursus and small circular monuments constructed between 3600 and 3300 BC played a vital role in this process of negotiation. These meetings may have become cloaked by rituals involving worship and even disposal of the dead, but the subtext remained the fundamentals of ordering life.

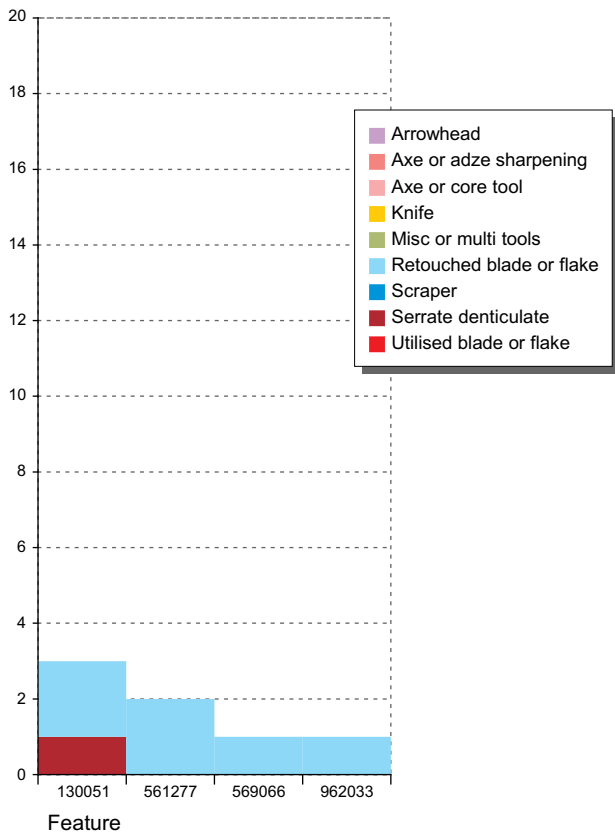
It would therefore appear that the Peterborough Ware Phase of the Neolithic (c 3400–2500 BC) in West London, was a time when the community that built the major monuments of the latter part of the 4th millennium were content to live their lives within the physical and social

framework they provided, with appropriate modifications and addition to monuments. If the overtly ritual aspects of life, as expressed through monuments, showed continuity or gradual evolution, then how people behaved in the wider landscape showed a more pronounced change during the period 3400 to 2500 BC, and one which would accelerate during the currency of Grooved Ware pottery. This change concerned a shift from deposition of pottery and flintwork in tree-throws and pits to almost exclusive pit deposition. We have interpreted these pits as the by product of ceremonies that linked families to places, land and resources

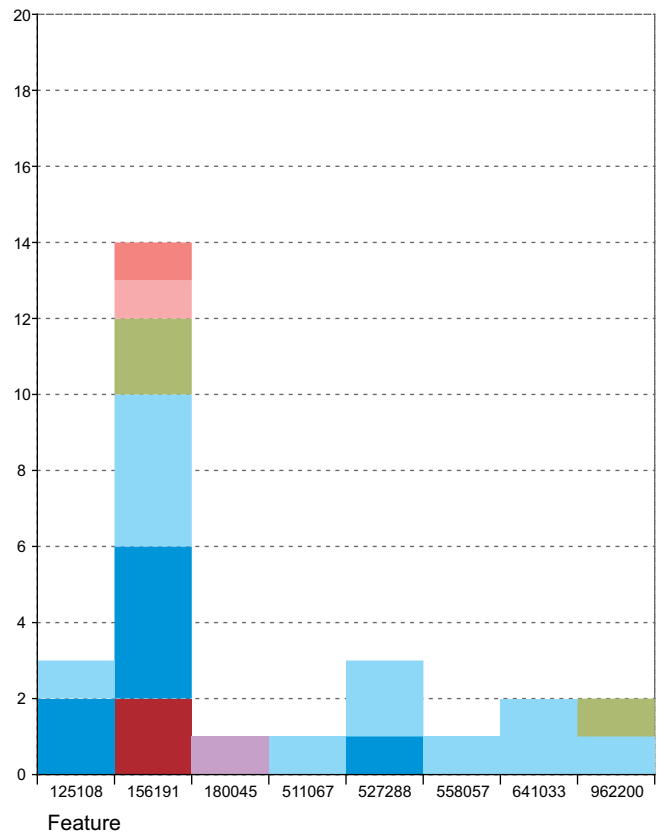
The digging of pits and the deposition of material within them can be thought of as part of the ceremonial 'chain'. Monuments provided the setting to facilitate agreement over access to resources in the landscape through ceremonies involving the living and the dead. The pits were the locations of other ceremonies which cemented the settling of the claims to resources and land negotiated by family groups

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Figure 2.60: Retouched tool assemblage composition from Plain Bowl tree-throws and pits, and Peterborough Ware and Grooved Ware pits

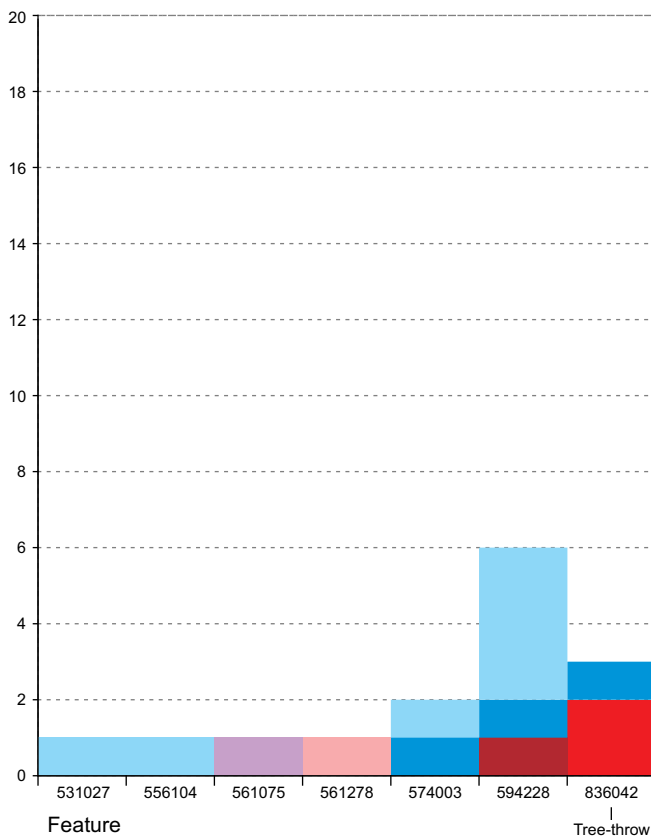
**A Plain Bowl Ware pits**  
Number of artefacts



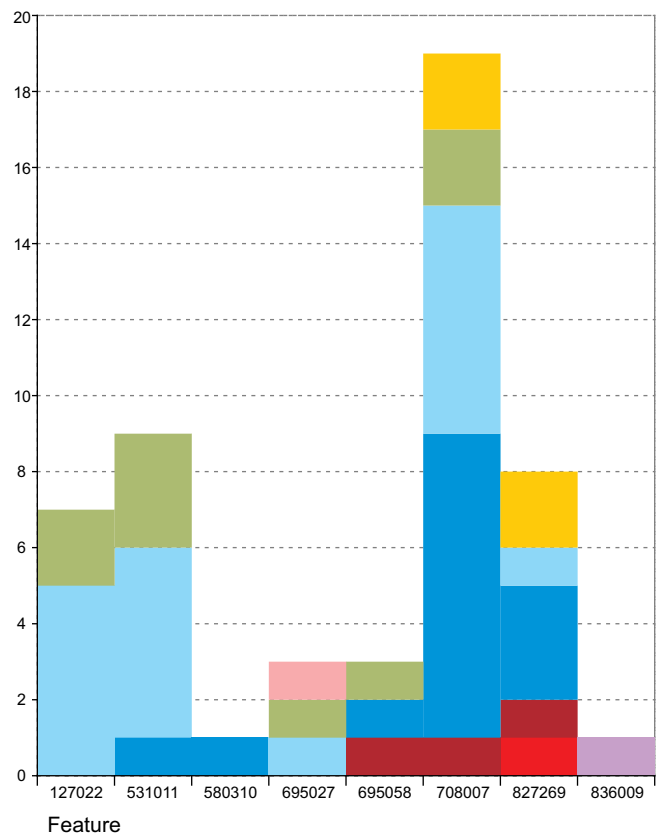
**B Plain Bowl Ware tree-throw**  
Number of artefacts



**C Peterborough Ware pits and tree-throw**  
Number of artefacts



**D Grooved Ware pits**  
Number of artefacts



within the monumental context. The pits (to accept the ceramic, lithic and ecofactual residues of autumnal rituals) would have been dug in areas that had been or were to be used for cultivation or pasture. These ceremonies, away from monuments and in the wider landscape, resulted in a physical act that linked the participants with that particular part of the landscape.

This pattern is repeated across the West London area, where excavations by the Museum of London and others, for example at Imperial College Sports Ground (Crockett 2001) and Heathrow Airport (Grimes 1961) in the latter quarter of the 20th century recorded isolated or small clusters of pits containing Peterborough Ware, often with lithic material and charcoal.

Evans *et al.* (1999) have drawn attention to the patterns of artefact deposition in tree-throws across southern Britain in the 4th millennium BC, and suggested that many were the deliberate receptacles for midden material. Allen *et al.* (2004) have drawn similar conclusions from their excavations at Dorney, near the Thames, 8 miles (13 km) away from Terminal 5. They support the findings of Evans *et al.* that middening occurred after the trees had fallen, and possibly after significant clearance in the early Neolithic (Allen *et al.* 2004, 91). Furthermore, they go on to suggest that the deposition of early Neolithic material within tree-throws can be seen as a continuation of a Mesolithic tradition (*ibid.*, 92). The lithic and ceramic assemblage from tree-throw 156191 was discussed in Volume 1 (Framework Archaeology 2006, 67, table 2.10) and was suggested as representing just such a midden deposit from a settlement of the 4th millennium BC, probably dating to between 3600 and 3300 BC.

Allen *et al.* (2004) have contrasted this pattern with that of pits dated by radiocarbon to the period 3350–2900 BC containing Peterborough Ware. They have suggested that these pits saw the deliberate deposition of selected pottery and flint assemblages rather than the general midden deposits of the early Neolithic, which

were placed in tree-throws. Presumably the shift to the digging of pits as receptacles for increasingly elaborate artefactual residues from ceremonies was influenced by an increasingly cleared landscape.

A comparison of the lithic assemblages from tree-throws and pits associated with Plain Bowl Neolithic pottery (c 3600–3300 BC), with similar features associated with Peterborough Ware (3400–2500 BC) and Grooved Ware (3000–2000 BC) at Terminal 5 supports this evolutionary trend.

Figures 2.59 and 2.60 compare the total lithic assemblages and the retouched tool assemblages from Plain Bowl tree-throws and pits, and Peterborough Ware and Grooved Ware pits. Table 2.18 summarises the quantitative and compositional patterns shown in these figures. These data would suggest an evolutionary line including increasingly elaborate artefact assemblages from Plain Bowl tree-throws through Peterborough Ware pits to Grooved Ware pits. Plain Bowl pits are shown to have a completely different lithic ‘signature’. It has long been known that Grooved Ware pits exhibit wide variation in their artefact assemblages. Some contain considerable quantities of large pot sherds, others contain many examples of restricted artefact types such as scrapers or arrowheads, whilst others contain large amounts of carbonised hazelnuts and seeds of wild fruit, although the majority contain varying combinations of all these traits (eg Cotton *et al.* 1986, 36; Barclay 1999, 14; Jones and Ayers 2004; Williams 2004, 166). It is clear that deposition in pits reflected a wide range of ceremonies and meanings.

The other major context of deposition of Grooved Ware pottery are the large henge monuments such as in the Upper Thames Valley (Barclay 1999) and of course Wessex (eg review of evidence in Garwood 1999 and Grooved Ware gazetteer by Longworth and Cleal 1999). The absence of henges from the middle and lower Thames Valley was clearly demonstrated by Burl in 1969, a situation that has changed little since (eg Harding and

Lee 1987; Holgate 1988, map 40; Holgate 1996, 19; Lewis 2000; Cotton 2004, 73). The amount of archaeological survey and excavation that has occurred in the Middle and Lower Thames since 1990 would surely have detected large henges if they were present, and one can only deduce that such monuments were either extremely rare or absent from this region.

It has been suggested that in the middle and lower Thames valley, small ring ditches and enclosures (such as the HE2 Enclosure) fulfilled the function of the large henge monuments of the Upper Thames (Lewis 2000, 73). Unfortunately the association of Grooved Ware with these ring ditches is sparse and far from certain. We have seen how the few sherds of Grooved Ware in the HE2 Enclosure are also accompanied by Peterborough Ware. A small ring ditch excavated by the Museum of London in 1989 at Mayfield Farm East Bedfont, produced no pottery at all (MoLAS forthcoming), and neither did the ring ditches excavated by Canham during the extension of the northern runway at Heathrow in 1969 (Canham 1978). In contrast a ring ditch excavated at the Esso West London Oil Terminal, just to the south of Heathrow and close to the Mayfield Farm site, produced six sherds of Grooved Ware and a few flint flakes (Farrant 1971, Wessex Archaeology 1997, Longworth and Cleal 1999, 185).

If some of these small circular monuments can be associated with Grooved Ware, and can be attributed to the 3rd millennium BC, then they would appear to be the continuation of a tradition stretching back to 3600 BC, which was associated with Plain Bowl pottery and then Peterborough Ware. If so, we can then postulate that these small ring ditches fulfilled the same function in society as their predecessors, ie as a location for performing ceremonies that held the community together and allocated land and resources.

We cannot know the details of these negotiations, rituals and ceremonies, and in this context negotiation is taken to cover a wide range of possibilities. It

may have taken place in the context of peaceful discussions with ritual feasting or negotiation by force through trials of strength or combat. The deliberate digging of pits and the deposition of pottery and flint may be part of the process of negotiation itself, or it may be an outcome of that process. In other words, once agreement had been reached over access to a particular resource or part of the landscape under the guise of a ceremony undertaken at one of the monuments, a small ritual may have been undertaken at the part of the landscape under contention. This may have ended with a ceremony laying claim to the land at issue, involving burying some of the ceramic and lithic material used in the ceremony, or derived from the respective settlements of the people involved. Allen *et al.* (2004, 92) have noted that the material deposited in Grooved Ware pits was carefully selected, not merely a sample of occupation debris. It is not surprising therefore that some pits containing Grooved Ware in the West London area also contained wild autumnal fruits such as sloes, crab apple and hazelnuts. These suggest that representatives of the produce of the wild, non-domesticated landscape also formed part of the ceremonies, and were deposited in acts of affirmation which were the final link in a chain of events which commenced with ceremonies undertaken at the monuments.

There is another intriguing aspect to the frequent occurrence of wild fruits and nuts in Peterborough Ware and Grooved Ware pits. We have previously described recent research on radiocarbon dates from charred cereal grains with reference to the appearance of agriculture in the very early 4th millennium BC (Brown 2007). This research also highlighted the very small number of sites with cereal remains dating to the 3rd millennium BC (Brown 2007, 1048), with most dates concentrating within the period 3800 to 3000 BC (Brown *ibid.*, 1050). It has been suggested that low intensity woodland-clearing cultivation of relatively pest and disease resistant crops in optimum soil and climatic conditions in the 4th millennium BC may have resulted in initially high yields

(Dark and Gent 2001). Changes to this balance during the 3rd millennium BC may have led to the apparent decline in cereal production as represented by radiocarbon dates (Brown 2007, 1050)

If we can explain the pattern of small ring ditches and pits of the 3rd millennium as continuations of a social mechanism that was established in the late 4th millennium BC, how do we explain the absence of large henge monuments in West London and the middle / lower Thames in general?

If we look at the Upper Thames, the region contains a rich concentration of causewayed enclosures, barrows, cursus monuments and henges (Loveday 1999, figure 5.3, based on Holgate 1988). Comparisons with the middle and lower Thames valleys are difficult due to the impact of the urban development of London and its satellites, but nonetheless comparisons can be made.

If we look at barrows, in the Upper Thames at Drayton, a long barrow is located approximately 1 km to the west of the cursus, and an oval barrow 250 m to the east (Barclay 2003, 8–9). Oval barrows also occur at Benson, Drayton St Leonard and Stadhampton (*ibid.*, 222–3). In contrast in the Middle Thames Valley and the Heathrow area in particular, long and oval barrows are rare or absent.

Turning to cursus monuments, in the Upper Thames they are concentrated between Drayton and Benson in Oxfordshire (Loveday 1999, 54) and the great Dorchester-on-Thames monumental complex of cursus and henge monuments has no adjacent causewayed enclosure (*ibid.*, 49). Barclay (2003, 223–4) extends this analogy to the whole Thames Valley and observes that causewayed enclosures and cursus monuments have mutually exclusive distributions. However, the southern end of the Stanwell Cursus is only 3.4 km from the Yeoveney Lodge causewayed enclosure, and 2.6 km from the possible causewayed enclosure at Mayfield Farm East Bedfont. Thus both could be reached after a 30 to 45 minute walk

from the southern terminal of the Stanwell Cursus. If the Mayfield Farm crop mark is indeed a causewayed enclosure, then the Terminal 5 Cursus complex is located approximately equidistant between this and the Yeoveney Lodge monument. Unlike the Upper Thames, at Heathrow we have a landscape which communities had (if current modelling of radiocarbon dates is correct (Bayliss *et al.* 2008)) already constructed causewayed enclosures before embarking on the cursus complex, but had not felt compelled to build long or oval barrows either before or during the currency of the cursus monuments. The Neolithic communities of the Upper Thames went on to build at least ten cursus or related monuments (Barclay 2003, 225–32) which can be divided into major and minor (longer or shorter than 800 m) monuments (Loveday 1985). The major cursus monuments tend to be correlated with the River Thames and the minor ones with the tributaries of the Thames (Barclay 2003, 241). In contrast the inhabitants of the Heathrow landscape constructed three minor and one mega cursus in one single complex.

If we look at the subsequent development of the upper and lower Thames cursus complexes during the 3rd millennium BC we can see further differences. In the Upper Thames, the Dorchester-on-Thames cursus was embellished with numerous circular monuments during the 3rd millennium (eg Loveday 1999, table 5.1), and many of these were transformed and rebuilt (see Fig. 2.51 above). Many of these later monuments acted as cremation cemeteries for late Neolithic, pre-beaker burials (Loveday 2006, 147). The largest of the 3rd millennium circular monuments was the 200 m diameter double ditched Big Rings Henge which was located adjacent to the southern cursus ditch and produced beaker pottery from primary positions in the inner ditch (Whittle *et al.* 1992, 184). In contrast, very few circular monuments appear to have been constructed during the 3rd millennium at the sites of the other Upper Thames cursus (Barclay 2003, 242). Barclay concludes that the Dorchester complex assumed the role of a regional centre of equal

importance to the Wessex complexes such as Stonehenge and Avebury. Loveday (2006, 148) suggests that the Dorchester complex became, during the 3rd millennium BC, a hugely important inter-regional cult sanctuary.

We might expect that the Heathrow area, having one of the largest concentrations of cursus in the country and including one of the longest and rarest type (the C1 Stanwell monument) would also evolve through the 3rd millennium with the addition of ring ditches and henges associated with Grooved Ware, and finally embracing the Beaker 'package' and associated rich burials. We have shown that this was not the case; that large henges are absent, and that small ring ditches, though present, are scattered and not concentrated on the cursus monuments. Grooved Ware deposition is predominantly in pits, and we have suggested that in the Heathrow area, and probably the Middle Thames in general, the preoccupation in the 3rd millennium was not with the sacred importance of any cult centres, but with utilising ritual and ceremony to hold communities together and apportion land and resources. This difference continued into the late 3rd and early 2nd millennia, when Beaker pottery, artefacts and practices were adopted in the Upper Thames, but are again notable by their rarity in the Middle Thames. One is left with the inescapable feeling that although the Upper and Middle Thames are part of the same river valley system, they belong to different worlds in 4th and 3rd millennia BC. The society of the Upper Thames had far more in common with that of Wessex in terms of monuments and artefact types, whilst the society of the Middle Thames was far more selective of the types of monuments and artefacts that were adopted. In short, this superficial comparison between the Upper and Middle Thames Valleys shows that the nature of the Neolithic society in both areas was different. This led to different ceremonial practices and monumental and depositional solutions to the problems of social cohesion and function and allocation of resources in the two regions.

As we will see in our final section of this chapter, these practices were to change during the period 2000–1700 BC, as people, kin-groups and the community came to terms with new conditions in society, and adapted the mechanisms of the 3rd millennium BC to a point where the manner in which land was apportioned was completely transformed.

### **The social origins of the landscape transformation of the 2nd millennium BC**

The period between the Late Neolithic (c 2000 BC) and Middle Bronze Age (c 1600 BC) saw a major transformation of the Heathrow landscape to one principally concerned with agricultural production enclosed by boundaries marked by ditches, banks and hedges. Within the enclosed areas lay fields, waterholes and permanent settlements accessed by trackways that gradually developed along the lines of the boundaries. This was a marked shift from the character of the Neolithic landscape, which was defined by highly visible major monuments set within open tracts of land that preserve more subtle traces of human activity.

The change to a pattern of enclosed field systems and settlements implies an ethos of claiming ownership of land by individuals or communities, although this may not have been either sudden or dramatic, either in landscape or in ideological terms. In addition, the pattern of enclosure was not chronologically or morphologically consistent across the Heathrow area. It may have been either a relatively swift or a gradual and cumulative process, reflecting emerging and shifting relationships between individuals, communities and settlements, negotiated with reference to a consciousness and memory of the landscape they inhabited.

### ***Chronology***

Our first concern in trying to understand this revolution in landscape use is to consider chronology. Once again, we have no radiocarbon dates relevant to the Early Bronze Age. Therefore, ceramic evidence continues to play a

large part in understanding the chronology of the 2nd millennium BC.

Firstly, we must consider the chronological overlap between Grooved Ware pottery of the 3rd millennium BC and Beaker pottery which spans the late 3rd and early 2nd millennium BC. Both Grooved Ware and Beaker utilised grog-tempered fabrics, and we have already discussed the pattern of Grooved Ware deposition. The Terminal 5 excavations produced very small quantities of Beaker pottery, and in fact there is very little in the way of Beaker pottery in the Heathrow area generally, although south of the Thames it is more common. Furthermore, if Garwood (1999, 161) is correct, then there may have been relatively little chronological overlap in the use of Grooved Ware and Beaker pottery. In ceramic terms Heathrow has a greater representation of Collared Urns, which, although still not common, are a clear element of activity of this date. Subsequently, during the Middle Bronze Age and into the Late Bronze Age there was a return to an almost universal flint-tempered tradition, and body sherds can sometimes be only broadly dated as Middle/Late Bronze Age. The Deverel-Rimbury ceramic tradition embraced a relatively conservative repertoire of forms—essentially thick-walled bucket and barrel shaped urns in coarse fabrics and smaller globular urns—generally containing better sorted and finer temper.

Lithic material can be broadly dated to the Late Neolithic/Early Bronze Age, a somewhat crude chronological range, apart from individual diagnostic artefact types such as arrowheads. Lithics in the latter part of the 2nd millennium BC become increasingly crude and flake-based, and so serve as only broad chronological indicators. Occasionally other artefacts such as the amber spacer bead (see below) can provide a finer chronological control, but as with most of the lithic material, such objects usually reside in later, not contemporary features. Furthermore, no environmental evidence that could be reliably dated to the late 3rd / early 2nd millennia BC was obtained.



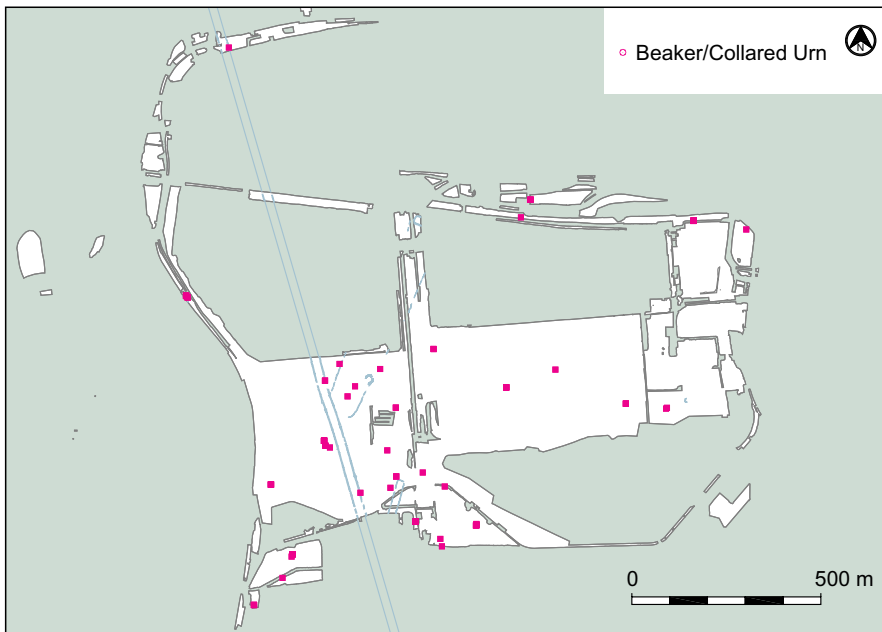


Figure 2.61: Distribution of Early Bronze Age Beaker and Collared Urn pottery

### Social changes

We have argued in the previous section that by the end of the 3rd millennium BC small groups of people negotiated, through ceremonies at monuments, access to and use of areas of landscape for settlement and agriculture. Tenure of land, probably on a seasonal basis, was then confirmed by the enactment of ceremonies, which included the deposition of Grooved Ware ceramics and associated lithics. Wild fruits and nuts also accompanied the process of deposition, suggesting that the ceremony occurred in autumn. We have argued that the monumental architecture and absence of large henge monuments suggests that society remained organised around smaller communities, possibly at the kin or clan level.

Our next firm chronological horizon is defined by a raft of radiocarbon dates associated with Deverel-Rimbury pottery. The dates span the period 1600 to 1100 cal. BC and were obtained on material derived from pits and waterholes associated with fields and settlements contemporary with the full *floruit* of the Middle Bronze Age 'complex' (see Chapter 3).

The period of transformation thus coincides with the Early Bronze Age

and corresponds, in terms of Needham's chronology (1996), with his Periods 3 (2050–1700 BC) and 4 (1700–1500 BC). These periods in West London, however, are better defined by the rarity or absence of diagnostic artefacts and monuments rather than their presence. There are no individual burials, barrows or large henge monuments unequivocally associated with Beaker pottery. Collared Urns, by comparison, are more abundant but still scarce. As Needham (*ibid.*, 131) has pointed out, nationally there is a large degree of overlap in the chronology of late Beaker and the Early and Middle Bronze Age Collared Urns (Burgess 1986). For West London and the Middle Thames in general, we are therefore unable to resolve the relationship between Collared Urns and Beaker pottery, in contrast to Burgess' treatment of the link between Collared Urns and food vessels in northern Britain (*ibid.*, 348–9).

The chronology of the Early Bronze Age lithic repertoire, represented particularly by barbed-and-tanged arrowheads, is, as already mentioned, insufficiently precise to allow us to understand changes within the period 2000 to 1600 BC. It is also difficult to determine the association of the lithics generally with Beaker and Collared Urn ceramics.

### Distribution of Early Bronze Age artefacts (2400 to 1600 BC)

Figures 2.61 and 2.62 show the distribution of pottery, lithics and an amber bead that can be dated to the Late Neolithic or Early Bronze Age with any degree of certainty.

*...only 156 sherds [of Early Bronze age pottery] weighing 846 g were identified (predominantly on the grounds of fabric alone). All sherds are grog-tempered, and have been assigned to two fabric types (GR1 and GR9). While the fabrics are visually very similar to the Grooved Ware fabric GR2, sherds in GR1 and GR9 are invariably oxidised, at least externally, and the few recognisable sherds are characteristic of Early Bronze Age ceramic traditions. Diagnostic sherds include rim and collar fragments from Collared Urns, and rims and comb-impressed body sherds from Beakers. The remaining sherds are all plain body sherds; some are tentatively identified as Beaker or Collared Urn where they are visually identical to diagnostic sherds.*

*Sherds are widely scattered across the site, usually in very small quantities [Fig. 2.61]. Condition overall is poor: with the exception of the material from pit 707016 sherds are very small and abraded with a mean sherd weight of only 2.99 g and only one context producing more than 30 g of pottery.*

*The diagnostic Beaker sherds came from a primary ditch fill (ditch recut 105009), and from a ring ditch (possibly a round barrow) 544182 [HE3 enclosure]. Collared Urn was recovered from the same ring ditch, and also from ditch 511058, tree-throw 570144, in Middle Bronze Age waterhole 544085, and in Neolithic pit 527124.*

*In all these contexts sherds can be regarded as residual finds, with the exception of the single sherd from the upper fill of the Stanwell Cursus ditch, eight sherds from ditch 511188, ten from 588271 and six from ditch 594103 (although these may be derived from pit 555632 which is cut by 594103). The Beaker and Collared Urn sherds (six sherds; 12 g) from ring ditch 544182 are highly abraded and unlikely to be in situ, although the occurrence here of these otherwise-rare ceramic types in association with at least one contemporary lithic*



Plate 2.30: Barbed and tanged arrowhead SF 14004



Plate 2.31: Barbed and tanged arrowhead SF 12037

ic tool does seem to point to contemporary activity in the vicinity, which may have been associated with this putative barrow.

On TEC05 the situation is rather different. Only one context contained Early Bronze Age ceramics (pit 707016), but the group consisted of 51 sherds weighing 509 g, all from a single large Collared Urn. This group appears to have been in situ, and probably represents discard of a broken vessel.

Little can be made of such a small assemblage, which (with the exception of TEC05) would appear to be largely residual. The

dearth of data from this period is consistent with the wider pattern in West London, where Early Bronze Age ceramics are noticeably absent, although a collection of Beaker and Collared Urn sherds was found at Runnymede (Needham 2000, 71–2 and fig. 3.5) and a miniature Collared Urn was recovered from a funerary context at Imperial College Sports Ground, Harlington (Wessex Archaeology 2000).

(Leivers et al., CD Section 1)

Lithic material is similarly sparse (Fig. 2.62). Small assemblage size, residuality and chronologically

imprecise technological evolution all combine to restrict the range and usefulness of lithics of definite Early Bronze Age date (see Plates 2.30 to 2.32). Figure 2.62 shows those lithics and amber that can with some confidence be dated to the period 2400 to 1500 BC. Of particular note are the barbed-and-tanged arrowheads which seem to cluster near the C1 Stanwell Cursus (Plates 2.30 and 2.31). In fact, two arrowheads were contained within the later re-cut of the cursus ditches in Area 49, and it is a possibility that the monument was re-modelled during this period (see above).

While the Early Bronze Age period is amply represented by residual diagnostic [worked flint] pieces, the paucity of coherent in situ assemblages dating to this time is striking; the pottery assemblage from Heathrow seems to register a similar hiatus, as do lithic assemblages from other sites in the locality (for instance RMC land, Harlington: Leivers 2006), although at others (especially Mayfield Farm, East Bedfont) large assemblages of Early Bronze Age flint work have been recovered during fieldwalking (Lewis 2000b) and at Kingsmead Quarry, Horton, relatively large quantities of diagnostic tools (especially arrowheads) indicate a very definite Early Bronze Age presence (Leivers 2005).

(Cramp and Leivers, CD Section 4)



Plate 2.32: Flint knife SF 14045

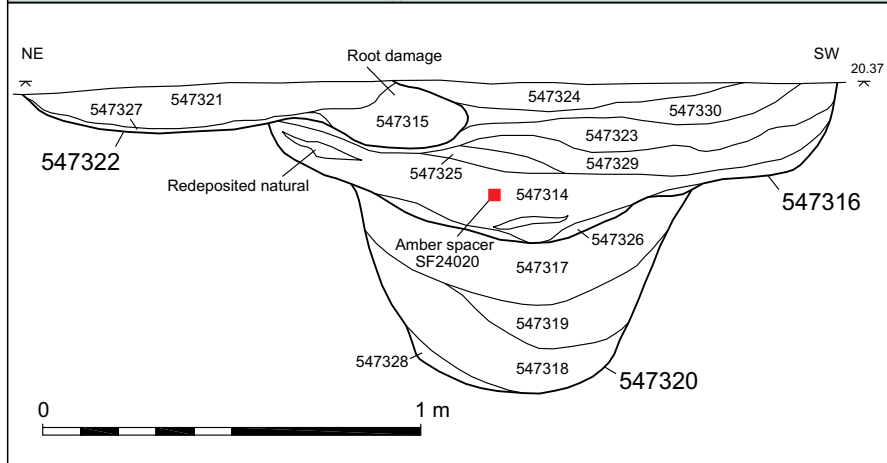
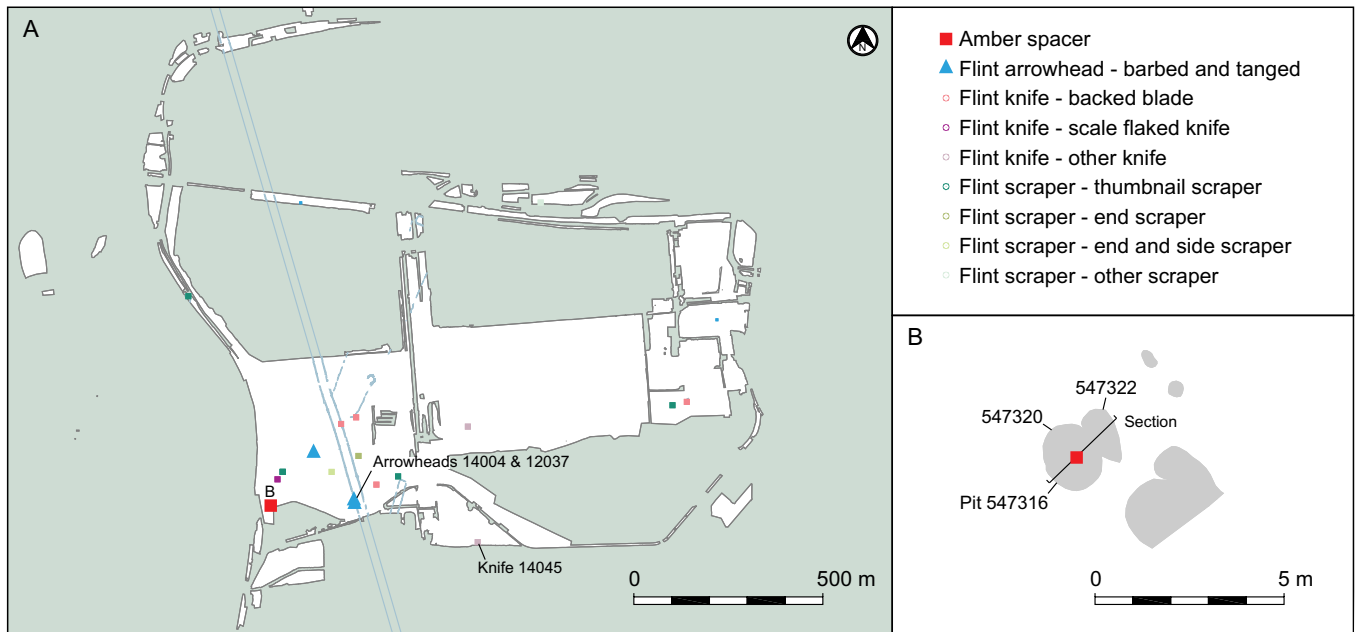


Figure 2.62: Distribution of Early Bronze Age diagnostic flint artefacts and amber spacer

1964, no. 227). There is no indication that the Heathrow bead had any funerary associations, although this cannot be entirely ruled out. What is more certain is that this was an object of some social significance, through a correlation of amber with contexts which on other grounds would be considered as high status. Moreover, amber could be regarded not just as a luxury/prestige item but also as symbolic of something more esoteric, even mystical, by virtue of its distant source and unusual properties. Amber, as well as jet, have been attributed magical powers and used as amulets in more recent times; in the Bronze Age such ornaments could have been part of some kind of 'supernatural power dressing' as much as status symbols in the real world (Sheridan 2003).

(Mephram, CD Section 10)

We will return to the distribution of other Early Bronze Age material in the wider landscape later, but first we will consider the archaeological features of this date at Terminal 5.

Only two features could be dated with confidence to the Early Bronze Age, and these were pits 588271 and 707016. The dating of the HE3 ring ditch in Area 23 is less certain, and will examine this monument first.

The single amber bead or spacer was located in a lower fill of pit 547316, which cut an earlier pit, 547320 (Fig. 2.62; Plate 2.33). No other datable finds were retrieved from either feature, making it difficult to date them accurately.

The single amber bead came from pit 547316. This is an incomplete example of a flat, rectangular spacer bead with four V-perforations, a fairly typical Early Bronze Age type. The potential date range for amber spacer beads is wide—perhaps a millennium overall—although this is at least partly due to a lack of precision in the radiocarbon determinations (Beck and Shennan 1991, 75). It is suggested that the spacer beads at least may have had an initial primary phase of circulation while some pieces remained in circulation for a considerable time after this (ibid., 76).

Amber finds of this date have not previously been documented in the London area (ibid., fig. 6.1), and the closest parallels for this object appear to lie in the rich 'Wessex' Early Bronze Age burials of Wiltshire such as Upton Lovell (Annable and Simpson

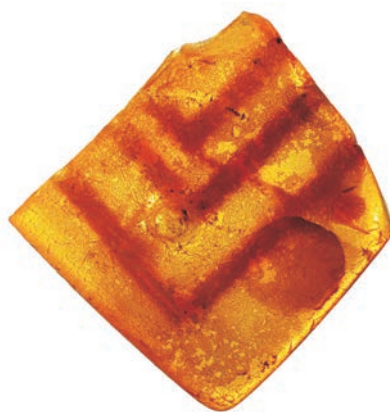


Plate 2.33: Amber bead or spacer SF 24020

## The HE3 Enclosure

The HE3 Enclosure was situated at the western edge of the Terminal 5 excavations, in Area 23 (Fig. 2.63; Plate 2.34). No trace of the monument was encountered in the evaluation trenches in Bedfont Court, 70 m to the south-west, so it is likely that it was another small circular ring ditch type enclosure. Only the north-eastern third of the ring ditch was exposed, and this had clearly undergone extensive modern truncation (just over 0.75 m had been lost from the 1943 ground surface). The ditch (584081) had also been disturbed in places by modern drains as well as by machinery tracking across the excavation before the animal bone could be lifted from the fills.

The monument was probably approximately 21 m (19 m internal) in diameter, with a ditch varying from approximately 1 m to 1.4 m wide and 0.1 to 0.3 m deep, though of course these would have originally been substantially deeper (Fig. 2.63; Plate 2.35). The ditch cut through a posthole (551342) which was itself undated, but demonstrates activity prior to the construction of the monument.

None of the ditch sections gave any indication of the location of a central or external bank or mound. Where discernable, the fills consisted of a yellowish silty primary fill derived from the sides of the ditch as it cut through the underlying natural alluvium. Overlying this was a much darker brown/grey clay secondary fill which contained almost all of the finds from the monument.

The finds assemblage consisted of flint flakes and spalls; only a partially complete Late Neolithic transverse arrowhead from the upper fills of intervention 551346 could be considered chronologically diagnostic. Fragments of animal bone were recovered in an extremely poor state of preservation. Pottery consisted for the most part of undiagnostic prehistoric sherds, although there was a total of six sherds with a combined weight of 12 g of grog-tempered pottery from the upper fills of three interventions (584047,

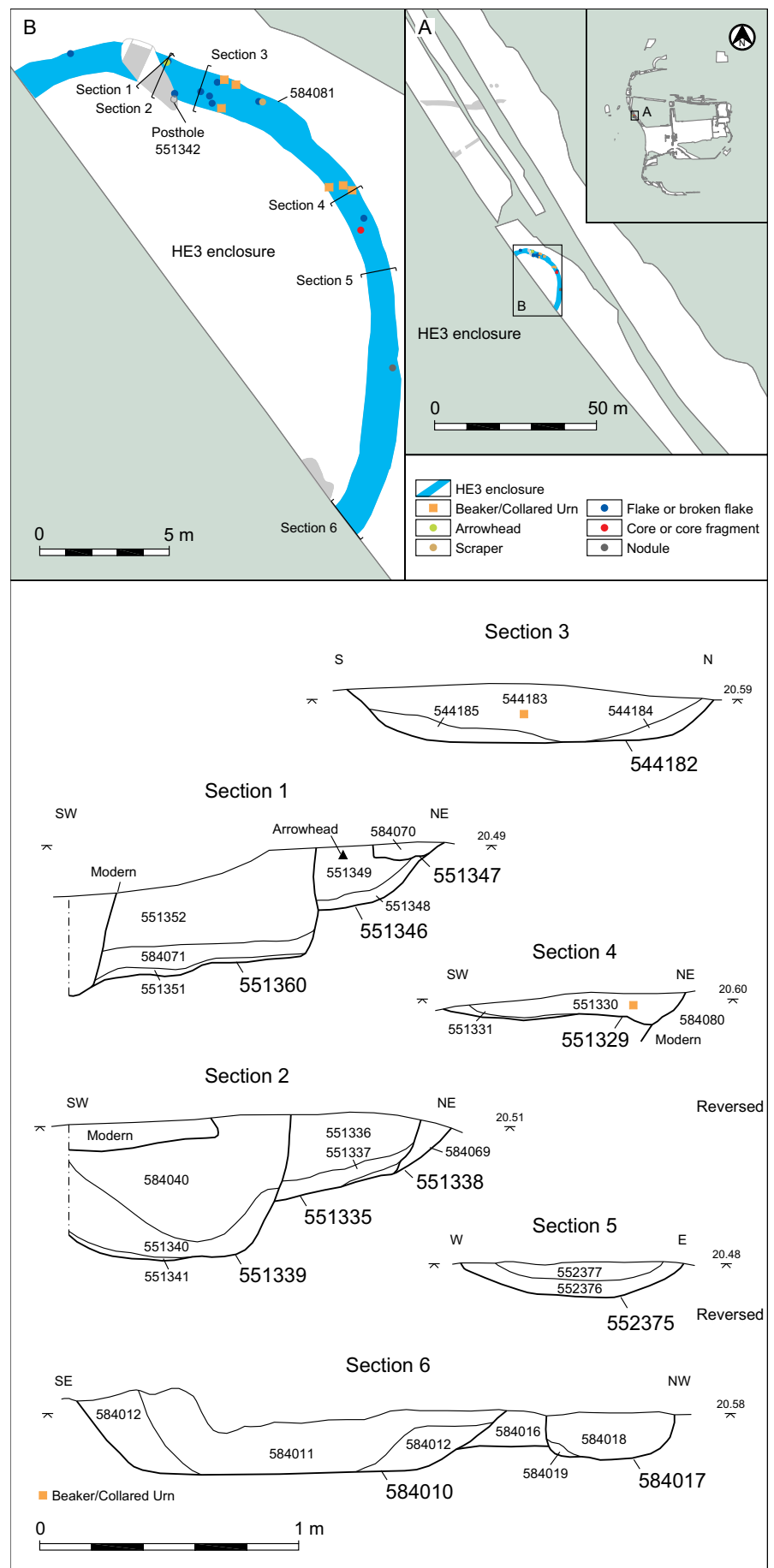


Figure 2.63: HE3 enclosure: excavated sections and pottery and flint distributions



Plate 2.34: HE3 enclosure under excavation

551329 and 544182). These have been interpreted as being fragments of Beaker or Collared Urn, dating from sometime between 2400 to 1500 BC. Unfortunately, the usual problems of dating monuments at Heathrow also pertain to the HE3 Enclosure. Some of the pottery (eg a Romano-British sherd)

is obviously intrusive, and the tiny fragments of Beaker / Collared Urn could also be an unreliable date indicator. However, in the absence of any definite Plain Bowl or Peterborough Ware, it is probably safe to assume that taken as a whole, the finds assemblage dates the use of the monument to the

latter half of the 3rd millennium BC at the earliest. Compared with the other circular monuments at Terminal 5, the diameter of the HE3 and HE1 enclosures are quite similar at 21 m, but HE3 appears to be a more regular circle as opposed to a horseshoe. Both HE1 and HE3 are larger and more complete than the HE2 Enclosure, which like the HE3 monument, probably also dates to the 3rd millennium BC.



Plate 2.35: Section 3 through HE3 Enclosure

### ***Wider landscape changes in the early 2nd Millennium***

The uncertainty over the dating of the HE3 Enclosure reflects the general situation in the Middle Thames area. Ceremonial monuments unequivocally dated to the Early Bronze Age are very rare. In West London as a whole, many small circular crop marks which could be attributed to the Early Bronze Age, have, on excavation, proved either undatable (eg Heathrow Site A; Canham 1978) or to date to the 4th and 3rd millennia BC (eg the Perry Oaks HE1 Enclosure; Ashford Prison ring ditch (Carew *et al.* 2006); see Fig. 2.22

and Table 2.9). A more certain Early Bronze Age monument is a barrow with a Collared Urn cremation located adjacent to the Thames on the Surrey bank at Hurst Park (Andrews 1996).

Early Bronze Age round barrows are usually associated with individualised burial rites and personalised artefacts, despite the occurrence of successions of later inserted burials. Barrows and Beakers tend to denote individuality and high status. The paucity of evidence of this type from across the large area excavated at Terminal 5 suggests that this tradition was virtually absent in the vicinity of Heathrow. Clearly people were still present in the landscape as the distribution of pottery and flintwork in Figures 2.61 and 2.62 illustrate, and they were probably living in a broadly similar fashion to the late 3rd millennium BC. The reasons for the extreme scarcity of Beaker ceramics, burial traditions and monuments are unclear, although it is possible that Beaker ritual and funerary activity were re-located to a focus on the floodplains of the Thames and its tributaries, as suggested by wider distributional patterns (Brown and Cotton 2000, 85). For example in central London, Beaker pottery has been recovered in small quantities near the Thames from sites in Southwark and Westminster (Sidell *et al.* 2002, 31). Perhaps the most impressive find in this respect is the complete bowl attributed to the Beaker tradition, placed in a small pit at Hopton Street in Southwark (Ridgeway 1999). Could there be a real shift in occupation away from the higher terrace gravels such as Heathrow, towards the floodplain? Leiver speculates that,

*...a linear barrow cemetery on the southern edge of the Heathrow terrace between Stanwell and West Bedfont points to further activity in the area. If Cotton, Mills and Clegg are correct in their reading of the distribution of round barrows along the Colne Valley as on the margins of settled land (1986, 41) then this may go some way to explaining the absence of in situ lithic assemblages of this date from the Heathrow T5 excavations on the plateau.*

*(Cramp and Lever CD, Section 4)*

In other words, the string of barrows along the southern edge of the Heathrow Terrace, along with the HE3 ring ditch on the Colne floodplain, may mark a retreat from the plateau. However, we have seen that circular crop marks may date from anywhere from the 4th millennium to the end of the 2nd (with most seemingly earlier within this range), so the date of the the Stanwell 'barrow cemetery' needs to be proved by excavation. In addition, the presence of the airport has destroyed any hope of understanding the complex landscape history of the central area of the Heathrow Terrace, so our view will always be coloured by our understanding of the margins. Conversely, the perceived tendency for Early Bronze Age material to be more prevalent on the Thames floodplain may be an artefact of better preserved, deeply stratified deposits in that environment. Despite the problems of differential preservation we do believe there is evidence for an association between use of Beakers and the Lower Thames terraces, with further evidence provided by excavations along the Eton Rowing Course (Allen *et al.* 2004). Here, situated on the floodplain adjacent to the Thames there were numerous scatters of domestic debris including lithics, hearths and Beaker and Collared urn pottery. In contrast, only a single pit was recorded on the gravel terraces (*ibid.*, 98).

Whatever the spatial distribution of occupation in the Early Bronze Age, we have argued previously that Late Neolithic society in West London was not one of powerful individuals and leaders who emerged from the ceremonies associated with the large monuments of the day such as henges, which are present in the Upper Thames and Wessex. Instead we have suggested that the Heathrow society adopted and used Grooved Ware within an existing tradition of monument use and pit deposition, and thus did not feel compelled to construct large henges. We can hypothesise that a similar situation pertained at the end of the 3rd and the start of the 2nd millennia BC. The Beaker 'package' was adopted only in part, for example lithics, and did not find a hold in

society because the society was not structured in a way that required it. Hence there are no large Beaker henges or deposits of Beaker material in monuments associate with Grooved Ware. Instead society in the Heathrow area during the last half of the 3rd millennium BC was centred on small kin or extended kin-groups, whose mechanism of land access and usage remained fundamentally unchanged: ceremonies at small circular monuments (such as perhaps the HE3 Enclosure) leading to pit deposits. Nonetheless, the nature of the pit deposits and their frequency on the Heathrow Terrace undoubtedly changed, particularly by the time Collared Urns were in use (2000–1500 BC). The centuries-old mechanism was breaking down or transforming. Society sought new ways of dealing with the problems of land access and tenure, although why this occurred we do not know. It could have been due to population growth or any number of other interrelated or unrelated factors. Nonetheless, we can see from the depositional contexts of Collared Urns an attempt to accommodate new monumental and burial traditions with old traditions of ceremonies resulting in deposition of material in pits. The following two examples from the Heathrow Terrace illustrate this point.

Firstly at Holloway Lane, 2.7 km to the north-east of Terminal 5 (see Fig. 2.1), was an aurochs which had been killed by six Conygar Hill type barbed-and-tanged arrowheads, then butchered and buried in a large pit (Cotton *et al.* 2006). The arrowheads are usually associated with food vessels and Collared Urns, and occasionally Beaker (Green 1980, 130; table VI). No ceramics were recovered from this pit, but the act of deposition clearly has echoes of the Grooved Ware pits of the late 3rd millennium BC. In fact, the pit containing the aurochs was excavated through a small pit containing Grooved Ware and other Grooved Ware pits were close by (Cotton *et al.* 2006). This juxtaposition is surely no coincidence, given the relative scarceness of Grooved Ware pits in the vastness of the Heathrow landscape. Cotton has speculated that the aurochs



Figure 2.64: Possible early 2nd millennium BC boundaries

burial may be the culmination of the Neolithic 'structured deposition' tradition (Cotton *et al.* 2006, 163), although if it is the culmination, then it also heralds changes. The aurochs was a wild animal of some rarity by the early 2nd millennium BC, and its deposition is an extreme manifestation of the wild fruits and nuts predominantly associated with Grooved Ware depositional practices. By the same token, the large pit that contained the aurochs presages the large waterholes that were dug from 1600 BC onwards to serve the Middle Bronze Age field system (Cotton *et al.* 2006, 162).

At Imperial College Sports Ground, two Collared Urns were associated with cremated remains buried in a pit. Two radiocarbon dates from these cremations span the range 1920–1750 BC and 1880–1670 BC (A. Barclay pers. comm.). At Hurst Park, Surrey, the barrow enclosing a Collared Urn cremation burial also enclosed a shallow oval 'scoop' or tree-throw containing Grooved Ware. Located 30 m to the west of the barrow was a large rectangular feature containing six sherds of Peterborough Ware (Andrews 1996).

Returning to Terminal 5, 137 m north-west of the HE2 Enclosure, pit group

821 consisted of two pits containing Grooved Ware (708007 and 695058) and an undated pit (707021) cut by another pit (707016) containing relatively large quantities (51 sherds, 509 g) of Collared Urn (see Fig. 2.57 above). These sherds were all from a single large Collared Urn. This group appears to have been *in situ*, and probably represents discard of a broken vessel. There were a few flint flakes but no traces of cremated bone. The Early Bronze Age pit (707016) was in turn cut by several Middle Bronze Age waterholes and a fragment of ditch.

Here the juxtaposition of the Grooved Ware pits and the pit containing Collared Urn is similar to the relationship between the pits at Holloway lane, even if the contents of the Early Bronze Age pits (aurochs and pot) are vastly different. Throughout this chapter we have shown the importance of places and locations to people through time, how places that were important became subsumed within the C1 *Cursus* for example. It would appear in West London at least that circumstantial evidence, such as the juxtaposition of these pits, points to a close chronological relationship between Grooved Ware and Collared Urn use, and that certain places retained their

importance from the late 3rd millennium into the early 2nd.

These examples can all be read as an attempt to continue the tradition of ceremonies culminating in the deposition of material employed in the ritual. It may well be, however, that these attempts at continuing the tradition of negotiated land access eventually proved insufficient and that social agreements following ceremonies of deposition gave way to more formal agreements manifested in more blatantly physical demonstrations of the negotiation process. Perhaps the barrows and cremation burials provide the first indication of a concern with treating certain individuals differently and erecting monuments around them. It would be logical to suggest that this provided the more formal mechanism for asserting land tenure which people adopted in the early 2nd millennium BC. However, even in these cases (such as the Hurst Park burial) we see a clear link with the practices of the 3rd millennium BC, which we have argued were concerned with ceremonies relating to affirmation of land access and resources. The practice of cremation and the construction of barrows at these locations could represent a change in the methods of

laying claim to land and resources. In this context, it is possible that the HE3 Enclosure at Terminal 5 represents a truncated barrow, since it is similar in form to that at Hurst Park. Instead of the deposition of ceramics, lithics and wild plant and animal produce following ceremonies, human bodies were cremated, buried with Collared Urns and the places marked with monuments. The monuments were clear physical markers of territory and the association of individuals of defined ancestries with that land.

Once again we have no refined chronological outline for this process, and do not know how long these practices continued. Put crudely however, the Hurst Park Collared Urn fits in the Late Series of Burgess' classification, which in turn accords with Needham's Period 4, 1700–1500 BC (Needham 1996, 132). These would appear to be crucial centuries, since evidence from Terminal 5 indicates that the first division of the landscape by formal field boundaries took place during this period or even earlier. Most importantly, Needham (1996, 132) has suggested that Deverel-Rimbury pottery probably originated in his Period 4, which accords with the appearance of land division and the first proper settlements (see Chapter 3).

If we accept that the adoption of cremation burial, sometimes accompanied by barrows and Collared Urns, was an attempt at formalising claims to land and resources, then it would appear that after an unknown period even this approach was not sufficient to achieve a long lasting agreement over access to resources. The strategy of excavating a series of banked and ditched boundaries across the landscape was thus a logical progression

in a series of progressively more overt attempts at claiming land tenure. The Early Bronze Age and Grooved Ware pits at Terminal 5 also hint at the start of this process. To the south-west of the Pit Group 821 (see above; Fig. 2.64 A) a sinuous irregular ditch extends for approximately 123 m in several truncated lengths. At one or two locations it is cut by the NW-SE aligned ditches of the Middle–Late Bronze Age field system. To the north-east of pit group 821, the alignment of the ditch is continued for a further 36 m by a series of short lengths of ditch, elongated pits and tree-throws (entity 2895). At one location this alignment is also cut by the field system ditch. A clearer example of the development of the Middle Bronze Age field system from the landscape of the early 2nd millennium can be seen in Area 54a (Fig. 2.64 B). Three tree-throws (552281, 552285 and 552289) were cut by a middle Bronze Age field boundary ditch 552309 along the same alignment. Just to the north and on the same alignment as the tree-throws and the late ditch, was pit 588271, which contained 10 sherds of grog tempered Beaker or Collared Urn pottery and a handful of flint flakes. We are not suggesting these two separate instances of earlier features being elaborated or replaced by boundaries represent the start of the 2nd millennium field system; merely that they provide examples of how the earliest field boundaries could have developed as a series of irregular features originating at locations of historic importance in terms of land appropriation.

It would thus appear that the unified community which built the Neolithic monumental landscape of 3600 to 3300 BC had itself undergone transformation during the 3rd millennium BC. We have suggested that after many

years of the community living contentedly within the monumental and social architecture they had constructed in the latter half of the 4th millennium BC, the second half of the 3rd and early 2nd millennia BC saw an increasing trend towards more overt ceremonial and physical affirmation of claims to land and resources. It would thus appear that the unity of the community was breaking down, and these mechanisms may have developed as an increasingly desperate attempt to maintain orderly access to resources, and therefore to retain community cohesiveness. Indeed, if we accept the physical division of the landscape by the first field boundaries as being a logical progression of this process, then it would appear that the community of kin-groups had finally broken down.

It could be argued that the act of landscape division was itself an expression of the importance of the individual and the small group, an imperative which elsewhere in the country was expressed by the adoption of high status monuments and artefacts such as barrow burials, rich grave goods, metalwork, Beaker and other forms of ceramics. However, in the Heathrow area there may have been a more egalitarian backdrop to the apparently personalised activity of splitting off plots of land from a previously communal landscape.

In the following chapter we will examine how the landscape was divided and how it developed through the latter half of the 2nd millennium BC. We will show how the individual landholdings reflected the individual kin-groups, and how these locked together to form a field system which was the product of the overarching community.