A Mesolithic Site at New Plantation, Fyfield and Tubney, Oxfordshire

By PHILIPPA BRADLEY and GILL HEY

SUMMARY

In 1988 the Oxford Archaeological Unit undertook an evaluation of approximately 11 hectares at New Plantation, Tubney, in advance of a planning application by Hills Aggregates Ltd for sand extraction. Mesolithic flint and pottery ranging in date from late Neolithic to post-medieval were recovered. This was followed, in February and May 1991, by more detailed investigation of two dense concentrations of flint in the E of the area and a more dispersed scatter to the N. Preliminary work suggested that the site was a late Mesolithic hunting camp[1] but full analysis of the data has led to reinterpretation and it is now believed that the majority of the material is early Mesolithic in date and reflects a more varied range of activities.

This report describes the excavation methodology employed, reports on the finds in detail and discusses the local and regional significance of the flint assemblage. The finds and the archive will be deposited with the Ashmolean Museum, Oxford.

INTRODUCTION (Figures 1 and 2)

The site is located at the N end of the parish of Fyfield and Tubney at SP 449008 within Tubney New Plantation, a largely coniferous wood planted this century. The land is owned by Magdalen College, Oxford. It lies on the Corallian ridge at a height of *c.* 95 m OD, overlooking the Thames Valley to the W. The Corallian around Tubney is composed of yellow, white and buff sands overlying limestone.[2] The sands are the decalcified remnant of calcareous sandstones and are up to 10 m thick in New Plantation.[3]

The parish is bounded by tributaries of the River Ock, the Osse Brooke to the W and S and Freya's Dyke to the E. The River Thames is a little over 2 km to the NW. A high ridge between 95 and 96 m OD runs across the northern part of the site, the ground slopes gently down to *c.* 92 m OD in the S.

ARCHAEOLOGICAL BACKGROUND

Mesolithic, Neolithic and Bronze Age flintwork has been recorded along the length of the Corallian Ridge.[4] This material has been mainly recovered by fieldwalking and as stray

[1] G.M. Hey, 'Fyfield and Tubney, Tubney New Plantation', *South Midlands Archaeology* CBA 9, xxii (1992), 48.

[2] J. Pringle, *The Geology of the Country Around Oxford* (2nd edn. 1926), Memoirs of the Geological Survey England, Explanation of Special Oxford Sheet, 45.

[3] J. Pringle, op. cit. note 2, 45; Hills Aggregates Borehole information.

[4] H. Case, 'Mesolithic Finds in the Oxford Area', *Oxoniensia,* xvii/xviii (1952/1953), 1–13; H. Case, 'The Mesolithic and Neolithic in the Oxford Region', in G. Briggs et al. (eds.), *The Archaeology of the Oxford Region* (1986), 18–37; R. Holgate, *The Neolithic Settlement of the Thames Basin* (British Archaeological Reports Brit. Ser. 194, 1988).

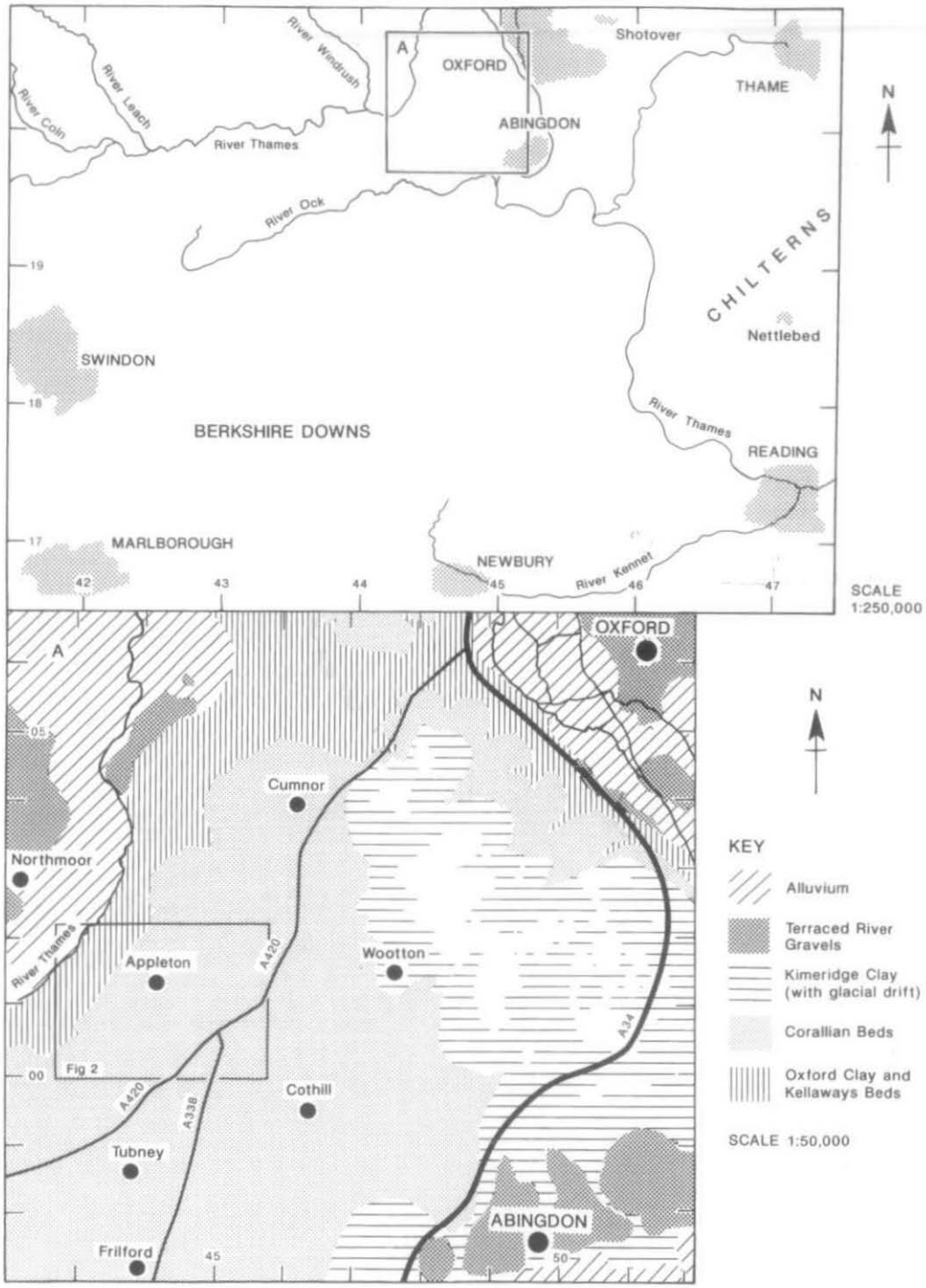

Fig. 1. Site location.

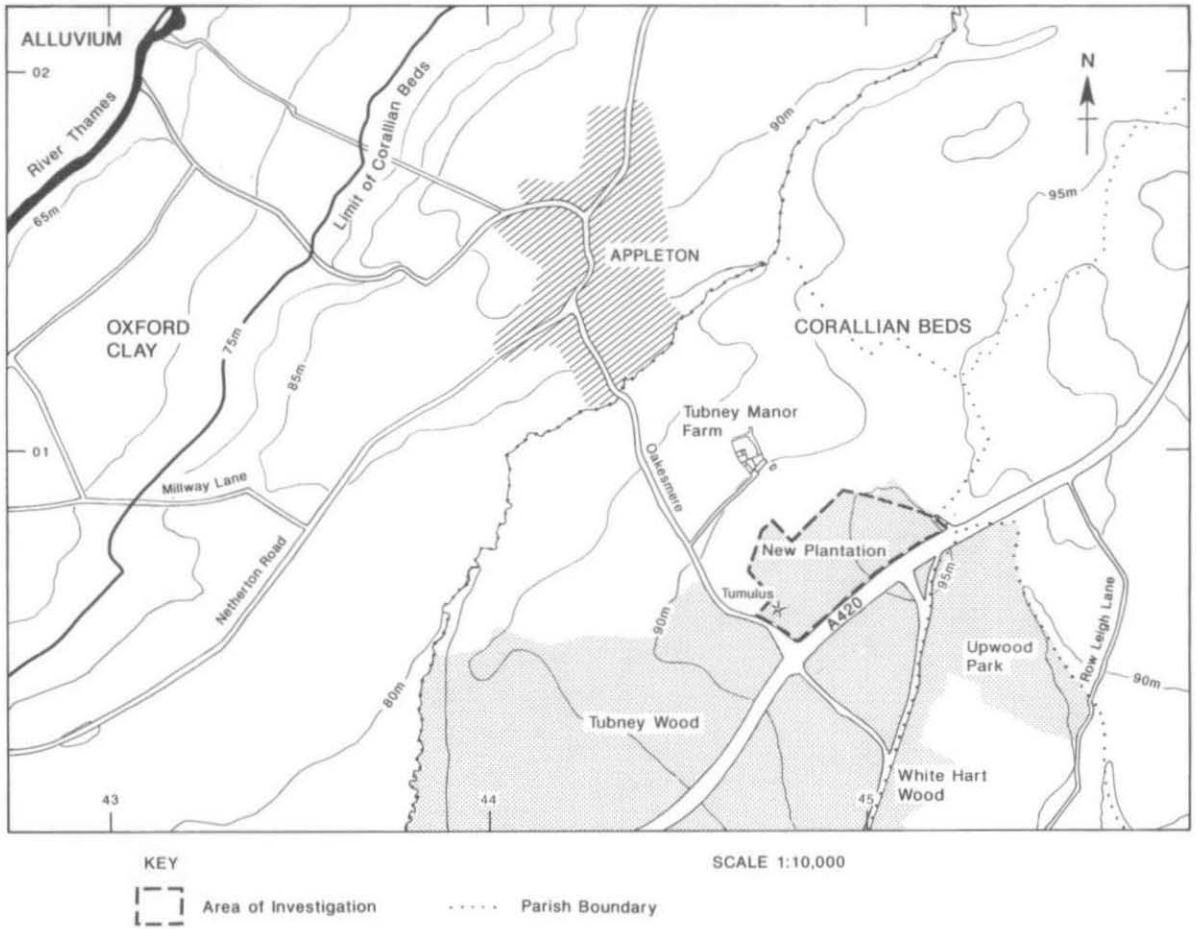

Fig. 2. Local topography.

finds. Several multi-period scatters have been found near New Plantation, for example at Parsonage Moor, Cothill,[5] Hitch Copse, Cothill,[6] and around Tubney Manor Farm.[7] In 1936 Leslie Grinsell inspected the area of New Plantation and reported that 'worked flints (a ? pigmy industry) are to be found on open ground immediately W'.[8] Important environmental evidence for the Pre-Boreal to the Atlantic period (*c.* 10000–6500 BP) has been recorded from pollen sequences at Cothill Fen, only 2 km SE of the site.[9]

The Victoria County History of Berkshire records two Bronze Age barrows on the site; one possibly levelled around 1872.[10] Confusion surrounds the possible location of these barrows. Rocque's 1761 map of Berkshire illustrates a single tumulus NE of the one mapped by the Ordnance Survey, though as a precise location this should be treated cautiously because of the small scale of the map.[11] Estate maps belonging to Magdalen College and early editions of the OS sheets also record only one barrow, in the same position as that marked on the modern OS map.[12] A 19th-century note records a tumulus in the northern part of the wood 'in the vicinity of the old church'.[13] Grinsell also only notes one barrow; in a field inspection in 1936 he records 'a slight rise in the ground' 25 m SE of the location on the modern OS map.[14]

Roman and medieval material has been found in and around New Plantation.[15] There is ample evidence for Roman occupation to the S, for example around Frilford, and the Oxfordshire pottery kilns to the E.[16] The medieval settlement of Tubney was originally centred around Tubney Manor Farm and the medieval churchyard abuts the site to the NW.[17] Medieval activity is well attested in the area.[18]

The Rocque map and early Magdalen College estate maps[19] show that the area of the excavation was mostly heath in the post-medieval period. However, land use recorded on an accompanying document to the 1841 enclosure map shows the area around the barrow as an arable field. The rest of the area, the North Heath, was pasture at that time but by the 1887 estate map it too had been converted to arable. Maps also indicate that stone quarrying took place in the N of the area. The New Plantation was planted in the early part of this century.

[5] Oxfordshire SMR, PRN 2273, fieldwalking conducted by the Abingdon Archaeological Society in December 1985, Mesolithic to Bronze Age flintwork recovered.

[6] M. Roberts, *Hitch Copse, Marcham. An Archaeological Assessment*, Oxford Archaeological Unit Manuscript Report (1988).

[7] F.M. Underhill, 'Notes on Recent Antiquarian Discoveries in Berkshire (III)', *Berkshire Archaeological Journal*, xlix (1946), 58.

[8] L.V. Grinsell, 'An Analysis and List of the Berkshire Barrows, Part 1 Addenda', *Berks. Archaeol. Jnl.*, xl (1936), 21.

[9] M. Robinson and B. Wilson, 'A Survey of Environmental Archaeology in the South Midlands', in H.C.M. Keeley (ed.), *Environmental Archaeology. A Regional Review Volume II* (Historic Buildings and Monuments Commission for England Occ. Paper no. 1, 1987), 26–28; S.P. Day, 'Post-glacial vegetational history of the Oxford region', *New Phytol*, 119 (1991), 445–70.

[10] *Victoria County History Berkshire*, iv (1924), 379.

[11] John Rocque, *Map of Berkshire* (1761).

[12] Estate maps of Tubney 1767, 1841 & 1887, Magdalen College Archive.

[13] *Archaeological Journal*, iii (1846), 69.

[14] L.V. Grinsell, op. cit. note 8, 21.

[15] 'Two vases of late Roman manufacture' and 'a grey vase containing ashes' were found in the parish of Tubney, *Arch. Jnl.* iii (1846), 69 (PRN 1672). Roman pottery and a bronze fibula were found at SP 4401, Appleton (PRN 1695) and Roman pottery was found at SP 4301, Appleton (PRN 1686). Medieval pottery found at Tubney Manor Farm, F.M. Underhill, op. cit. note 7, 58.

[16] C. Young, 'The Upper Thames Valley in the Roman Period', in G. Briggs et al. (eds.), *The Archaeology of the Oxford Region* (1986), 58–63.

[17] J. Brookes, 'Tubney, Oxfordshire: Medieval and Later Settlement', *Oxoniensia*, xlix (1984), 121.

[18] G. Briggs et al. (eds.), *The Archaeology of the Oxford Region* (1986), 185–88.

[19] op. cit. notes 12 & 13.

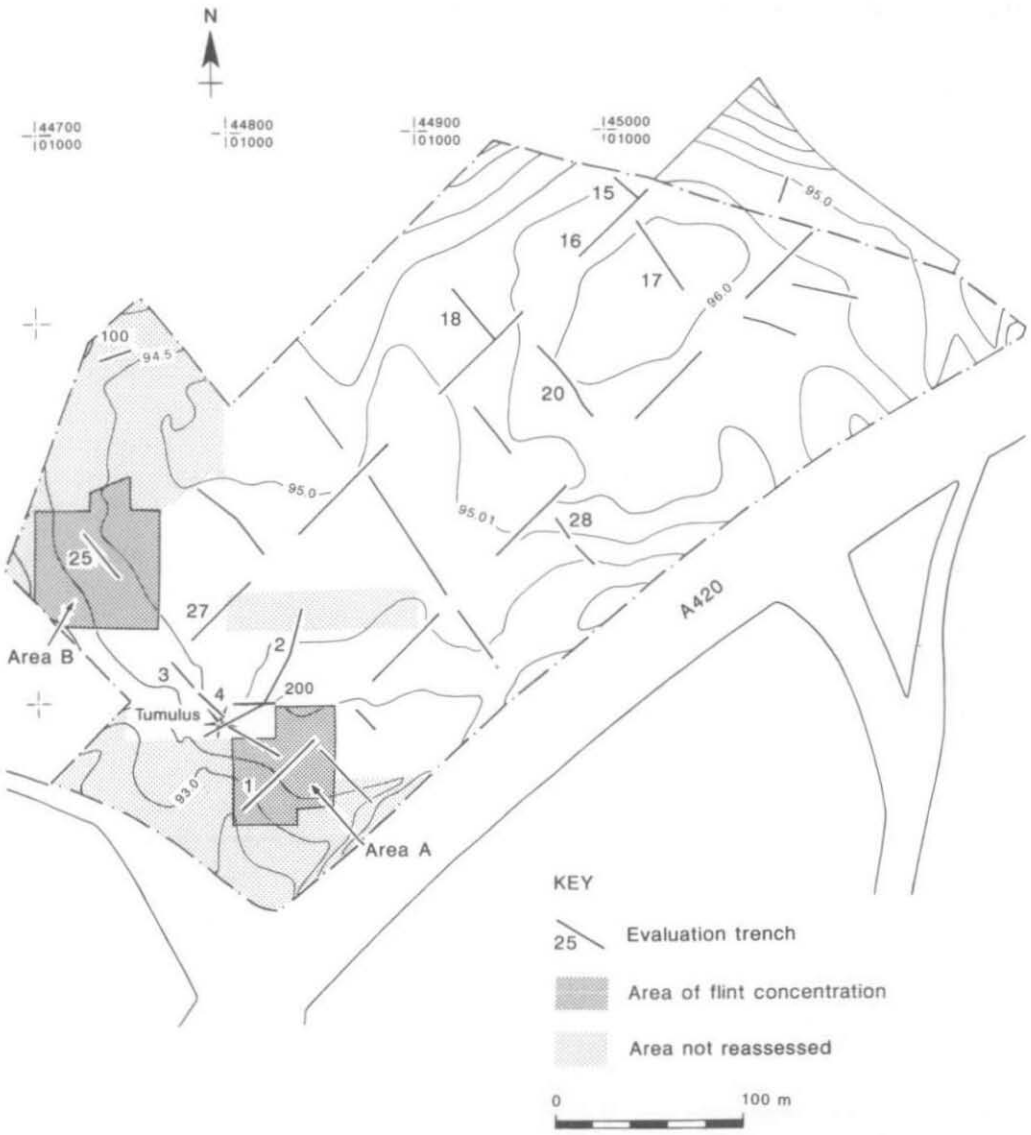

Fig. 3. Site plan showing location of Areas A and B, evaluation trenches, the location of the barrow as recorded by the Ordnance Survey, and areas which were not reassessed.

HISTORY OF ARCHAEOLOGICAL INVESTIGATION (Fig. 3)

In 1988 the Oxford Archaeological Unit undertook an evaluation of the New Plantation on behalf of the developer, Hills Aggregates Ltd, to assess the archaeological potential of the site and, in particular, the location and state of preservation of the round barrow(s). The evaluation, which covered *c.* 11 hectares, was severely hampered by the tree cover and the position of the trenches was, to some extent, dictated by this and by access routes throughout the wood. One trench was also located away from the main area, to the N. The

trench locations are shown in Figure 3. Details of the methodology and the results of the evaluation may be found in the archive.[20] In summary the evaluation revealed two scatters of flint in Trenches 1 and 25 and a thin scatter of flint to the N (Trenches 15, 17, 18 and 20). All the flint was recovered from disturbed contexts. Medieval pottery was also recovered from Trenches 2, 3 and 4. No evidence was found for a barrow mound, ditch or associated features.

In February and May 1991 further work was carried out at New Plantation as a condition of planning consent. This was concentrated on the scatters identified in the evaluation (Areas A and B) as being of greatest significance. However, some work was carried out in the rest of the threatened area and two further trenches were excavated in an attempt to locate the barrow.

METHOD

Undergrowth and a layer of modern leaf-litter approximately 0.05 m thick were mechanically stripped from Areas A and B. Finds recovered in the evaluation were believed to have come from disturbed contexts and no archaeological features had been observed. Therefore, although some work was conducted in the early stages of the project to look for *in situ* deposits (see below), the main aim of the excavation was to recover finds by dry sieving soil from test-pits. The sandy nature of the soil lent itself well to this exercise. Both 10 mm and 5 mm mesh sizes were used; the coarser mesh to locate clusters of flint within the overall concentrations and the finer mesh to recover as full a range of flint types and size as was practical within the time constraints. Smaller mesh sizes were tried on the site but proved to be extremely time-consuming and not particularly rewarding. Five 10-litre soil samples were also taken from Area A (at SP 44824/00662) for wet sieving through a 0.75 mm mesh. It was hoped that microdebitage would be recovered. However, although some flints were recovered, the overall recovery rate did not differ markedly from that of the dry sieving.

The pit array was aligned on the National Grid. The strategy adopted on both Areas A and B was to define the areas of greatest flint density by sieving pits on a 5-m grid through a 10-mm mesh. Once concentrations had been located, these areas were targeted by opening further test-pits within them and sieving through the 5-mm mesh size. Some test-pits with lower flint densities were subsequently re-sieved through a 5-mm mesh in order to assess the quantities of material missed. Soil from 90.25 m^2 was sieved through 10-mm mesh and soil from 58 m^2 through 5 mm. Soil from 3.5 m^2 was re-sieved. Although this method undoubtedly resulted in the recovery of the greatest number of flints, it did not facilitate statistical analysis of the results. Finds were separated by layer and by 0.10-m spits within each layer.

Area A was approximately 2900 m^2 and centred on SP 44830/00660. A transect of 10 × 2 m^2 test-pits on a 10 m grid was excavated and the spoil was sieved through a 10 mm mesh (Method A). 39 × 1 m^2 test-pits spaced at 5 m apart were also excavated and the spoil from them was sieved through a 10 mm mesh (C). The spoil from three squares excavated by Method C was later sieved through a 5 mm mesh to check artefact recovery (E). Further test-pits, 4 × 2 m^2 (D) and 6 × 1 m^2 (F) were excavated within the concentrations located; the spoil from these test-pits was sieved through a 5 mm mesh. Methods B and K were abandoned as being unpractical. 17 flints were recovered and they have been counted with the unstratified material.

[20] R.A. Chambers, 'New Plantation, Tubney, Oxfordshire Archaeological Assessment', Oxford Archaeological Unit Manuscript Report (1988).

A similar approach was adopted in *Area B*. An area of *c.* 4350 m² centred on SP 44730/00775 was examined. 125 shovel-test pits *c.* 0.3 m² on a staggered 5 m grid were excavated (Method H); spoil was sieved through a 10 mm mesh. The spoil from six squares of H was re-sieved through a 5 mm mesh to check artefact recovery (J). In addition 36 × 1 m² test-pits were excavated where flint density was high. The spoil from these test-pits was sieved through a 5 mm mesh (I). Method G was abandoned. Seven flints were recovered which have been counted with the unstratified material.

Within Area A, an area 150 m² was hand-cleaned and artefacts recovered from the surface in order to locate a possible area of burning detected in the evaluation. This was discontinued, in consultation with the County Archaeologist, as it became clear that the discolouration observed was a result of magnesium staining and that the flints were not *in situ*. The exercise clearly demonstrated the widespread presence of tree-throw holes beneath the disturbed ground surface and confirmed the evaluation conclusion that the survival of small, subsoil features would be extremely unlikely. Initially some of the sieved pits within Area A were excavated 2 m × 2 m and on a transect (Method A), partly to check for possible features, but this, too, was abandoned when the full extent of tree disturbance was appreciated.

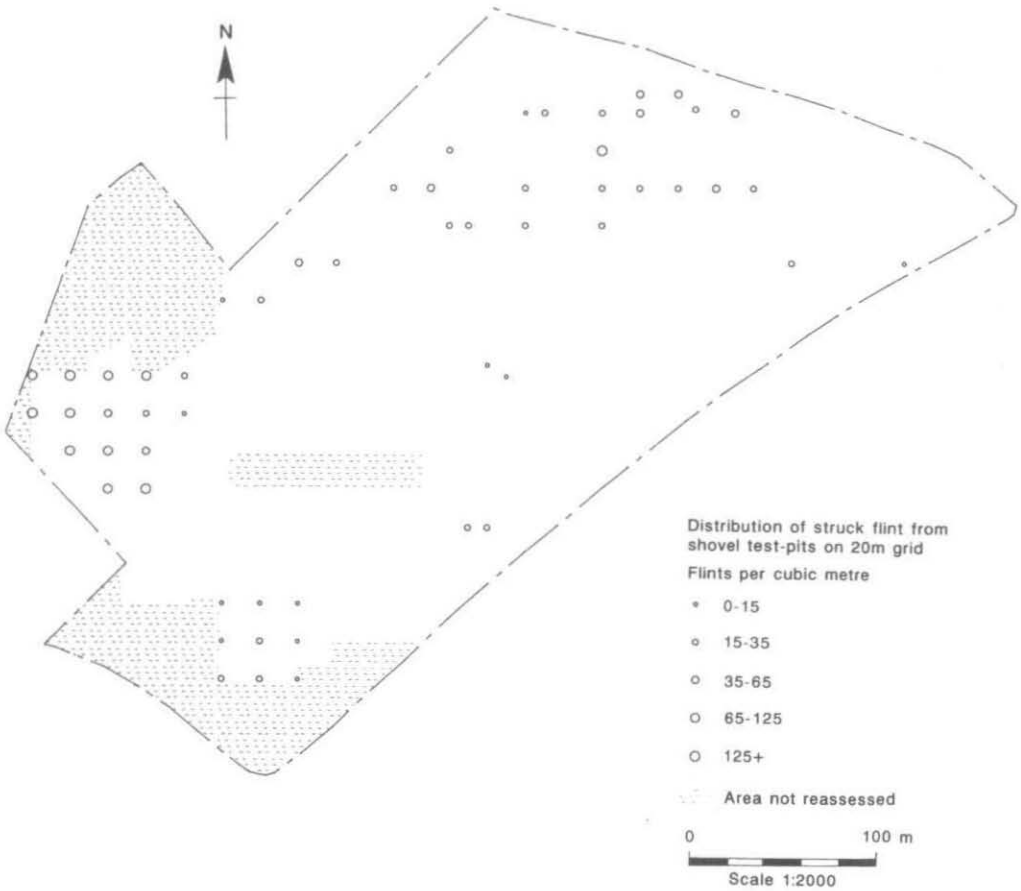

Fig. 4. Density of struck flint per m³ from test-pits spaced at 20 m, with comparable densities calculated for Areas A and B.

It became apparent that, because of the difficulties of spacing the evaluation trenches and the problems of recovering small flints from machine dug holes, the evaluation might not have identified all flint scatters in the area. After tree felling, the remaining area under threat was therefore reassessed using shovel test-pits (0.3 m^2) on a 20-m grid (Method Z), infilling to 10 m where flints were present. Two hundred and thirty seven pits were excavated, 181 at 20-m spacing and 56 at 10 m. The soil was sieved through a 10-mm mesh. Unfortunately, it was not possible to examine some areas in the W of the site because of timber piles and remaining tree cover (See Fig. 3). Where clusters of flints were recovered additional test-pits 1 m^2 were excavated, 9 in total. These test-pits were sieved through a 5-mm mesh (Y). The results of the 20-m spaced pits have been plotted, along with calculated results reproducing the same spacing and test-pit size for Areas A and B, in order to provide a more accurate comparison of flint density over the entire development area (see Fig. 4).

Two trenches (100 and 200) were excavated in a further attempt to locate the round barrow(s). They were both initially dug by machine and then hand-cleaned. Two potential locations were examined. Trench 100, 18 m long, 2 m wide and 1.3 m deep, was positioned across a low mound to the N of Area B. The mound was 0.5 m thick and composed of layers of yellow and brown sand. It may have been formed by stone quarrying nearby or possibly have been part of an old rabbit warren. A large tree-throw hole was found in the centre of this trench.

Trench 200 was 22 m long, 1 m wide and up to 0.9 m deep. The trench was located to the E of the position of the tumulus marked on the OS map. The trenches excavated in this area in evaluation had failed to recover any evidence for a barrow. A number of tree-throw holes were found in the centre of the trench. No archaeological features were observed.

ARCHAEOLOGICAL CONTEXT

The upper three spits of soil excavated were layers of mottled yellow and brown sand, which were interpreted as ploughsoil. Below this, flint was recovered from tree-throw holes or from the surface of the natural sand. Some tree-throw holes cut through the ploughsoil while others were sealed by it, implying several phases of clearance, an hypothesis supported by the artefacts retrieved and the documentary evidence. The pottery recovered (Table 8) would suggest that the initial clearance was at least pre-Roman in date. The concentration of flint within tree-throw holes would thus seem to have been the result of post-depositional activity. The flint scatter was therefore not *in situ*, although the condition of the material and the survival of localized clusters of flint suggest that it had not been moved very far.

THE FINDS

STRUCK FLINT by PHILIPPA BRADLEY

Introduction

A total of 6664 pieces of struck flint and 86 pieces of burnt unworked flint were recovered from the area investigated. The composition of the assemblage is summarised in Table 1, selected artefacts are illustrated in Figs. 11–12 and described in the catalogue (p. 22).

TABLE 1: OVERALL COMPOSITION

'Flakes' = Flakes, blades and core rejuvenation flakes

Area	*Irreg. Waste*	*Cores*	*Flakes*	*Chips*	*Microburins*	*Microliths*	*Other Retouched*	*Total*	*Burnt*	*Broken*
A	43	10	1178	764	6	15	17	2033	539	1068
B	44	19	2205	1841	29	19	30	4187	1018	2537
Reassessment	5	4	143	86	1	1	3	243	57	130
Evaluation & Unstratified	3	8	163	19	–	4	4	201	24	125
Total	95	41	3689	2710	36	39	54	6664	1638	3860

Artefact recovery

The methods employed are described in detail above. The two concentrations identified from the evaluation were test-pitted and sieved through various mesh sizes. The remainder of the area under threat was less extensively examined but both coarse and fine mesh sieves were used. The composition of the assemblage by mesh size and area sieved is summarised in Table 2.

TABLE 2: COMPOSITION BY MESH SIZE AND AREA SIEVED

Area	*Mesh size mm*	*Area sieved m²*	*Irreg. Waste no. %*	*Cores no. %*	*Flakes no. %*	*Chips no. %*	*Microburins no. %*	*Microliths no. %*	*Other Retouched no. %*	*Total*	*Burnt*	*Broken*
A(A & C)	10	79	19(6.3)	5(1.7)	254(84.1)	15(5.0)	1(0.3)	–	8(2.6)	302	42	144
(D & F)	5	22	23(1.4)	5(0.3)	872(52.7)	725(43.8)	5(0.3)	15(0.9)	9(0.5)	1654	477	875
(E*)	5	3	1(1.7)	–	37(61.7)	22(36.7)	–	–	–	60	19	36
B(H)	10	11.25	5(4.0)	3(2.4)	102(81.0)	8(6.3)	–	–	8(6.3)	126	15	73
(I)	5	36	39(1.0)	16(0.4)	2087(51.8)	1817(45.1)	28(0.7)	19(0.5)	21(0.5)	4027	998	2442
(J*)	5	0.5	–	–	11(40.7)	15(55.6)	1(3.7)	–	–	27	5	16
Reassessment (Z)	10	21.33	1(2.0)	2(3.9)	44(86.3)	2(3.9)	–	–	2(3.9)	51	7	29
Y	5	9	4(2.1)	2(1.0)	99(51.6)	84(43.8)	1(0.5)	1(0.5)	1(0.5)	192	50	101
U/S	–	–	3(1.7)	6(4.0)	143(79.9)	21(11.7)	–	3(1.7)	3(1.7)	179	19	118
Evaluation	–	–	–	2(4.3)	40(87.0)	1(2.2)	–	1(2.2)	2(4.3)	46	6	26
Total	–	182.08	95	41	3689	2710	36	39	54	6664	1638	3860

* re-sieving

It can be seen that mesh size affected overall recovery rates. Interestingly no microliths were recovered from the coarse mesh sieving and only four were from hand-retrieved samples, most coming from 5 mm mesh sieving. Chips (pieces with a maximum dimension of 10 mm or less) and microburins are under-represented from the coarse mesh sieving and hand-retrieved samples, for example the evaluation trenches. Where chips were recovered in quantity, in Areas A and B, they represent between 43 and 45% of the material from the fine mesh sieving in contrast to only 5–6% of the material recovered by other means (Table 2).

Distribution of struck flint

Two main concentrations of flint were recovered: Area A in the SW centred on SP 44830/00660 and a larger concentration of flint in the NW, Area B, centred on SP 44730/00775. A more dispersed scatter was located to the N centred on SP 44950/00930. The overall composition of the flint from these three areas is generally similar (see Table 1), although the density of the individual concentrations varies. These differences may be more apparent than real, reflecting the level of work carried out. The majority of the assemblage is early Mesolithic in date. A transverse arrowhead (Fig. 12, F22) was recovered from SP 44930/00880, indicating the presence of some later Neolithic material (see below).

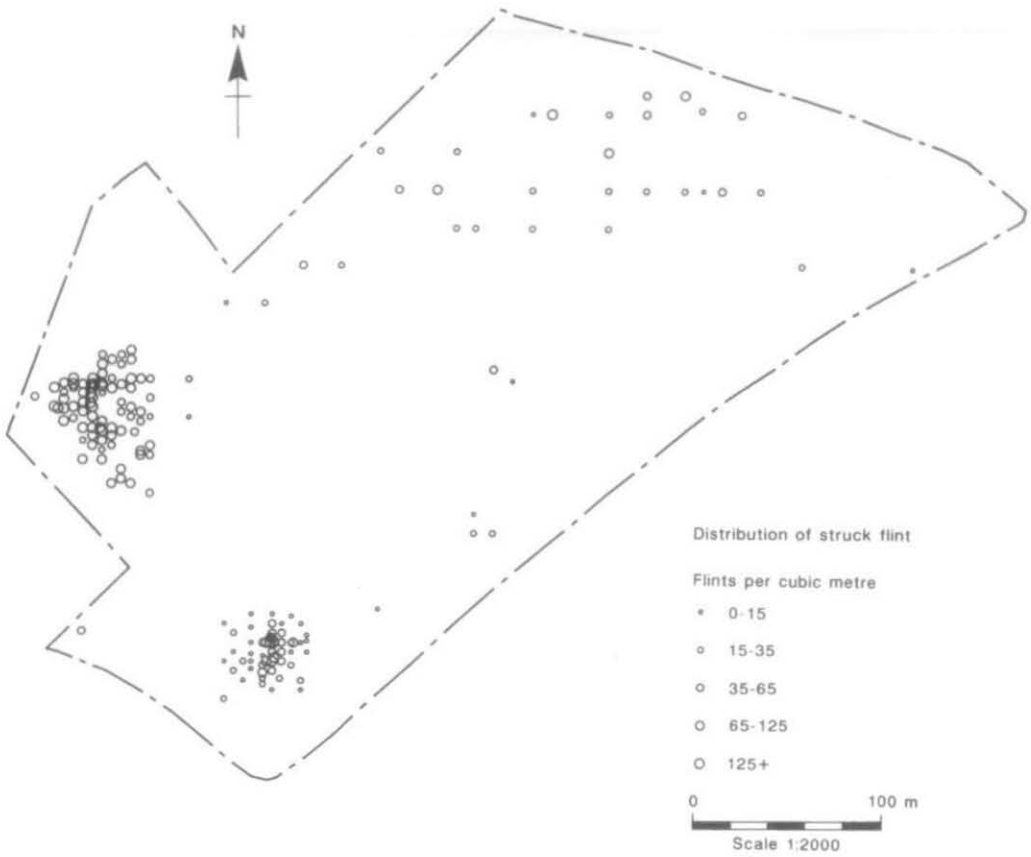

Fig. 5. Overall density of struck flint per m^3.

The distribution of the burnt unworked flint coincides with the struck flint distribution, although burnt flint is less common to the N (Fig. 6).

Approximately 68% of the assemblage was recovered from ploughsoil layers. All types of artefact were distributed through the soil profile, for example, heavier items such as cores and burnt unworked flint occurred in both ploughsoil layers and tree-throw holes. Smaller pieces such as chips and microburins were again distributed throughout the soil profile. Some test-pits had concentrations of flint throughout their profiles. The vertical distribution of the finds combines with the structure of the soil to suggest that the scatter had been disturbed by ploughing.

Raw materials

The flint is generally dark brown in colour, cherty inclusions were noted and cores have sometimes shattered along internal lines of weakness. Some cores are fairly small pebbles whilst others, for example F19, had originally been much larger nodules. Cortex is white or grey and frequently stained brown. Cortication is varied, artefacts from the same layer of a test-pit often exhibit very different cortication. One or two cores have very heavy white cortication, perhaps suggesting that they came from the Chalk. Sand glossing and yellow staining were also noted on some pieces. The Upper Chalk of the Berkshire Downs to the S is the most likely source for this material. The flint may have come directly from the Chalk or the superficial deposits capping the Chalk.

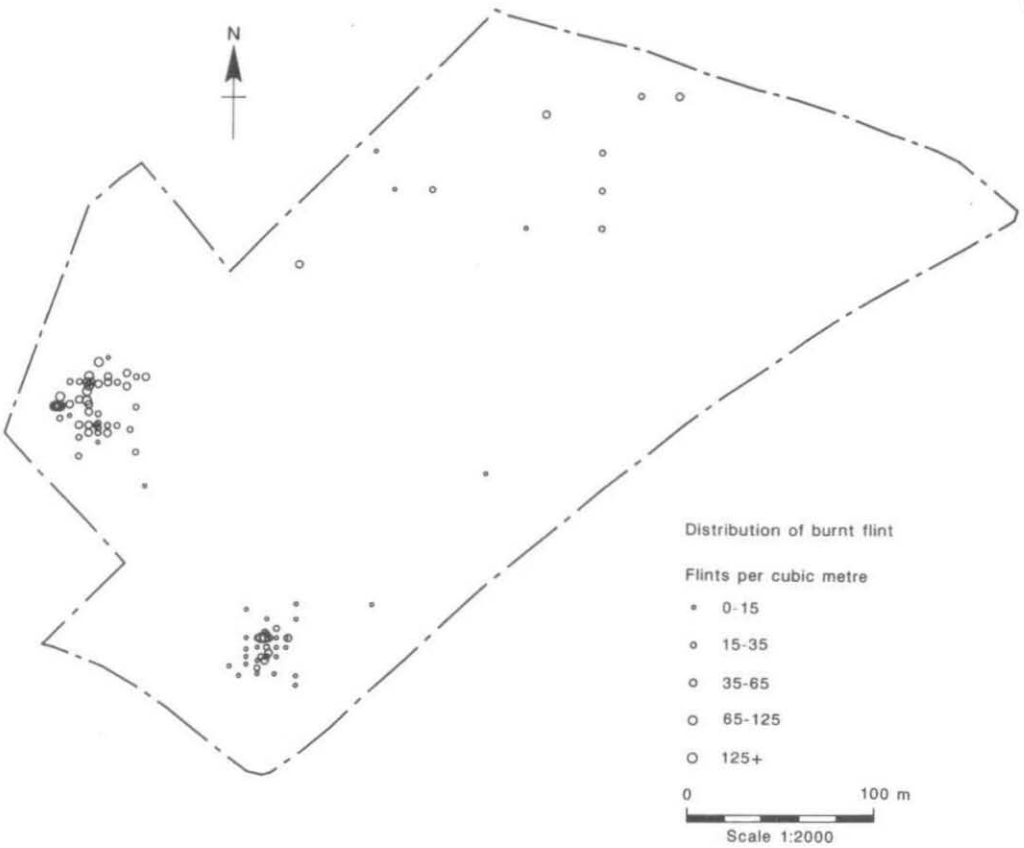

Fig. 6. Overall density of burnt flint per m^3.

The assemblage

Debitage (Figs. 7 and 8)

Metrical analyses were not attempted as much of the material was burnt and/or broken (Table 1). The complete flakes and blades were dispersed horizontally across the site and vertically within the soil profile. The presence of some later flintwork might have skewed any length/breadth ratio distributions produced. The visual distinction between flakes, blades and bladelets, together with an inspection of the material for technological information such as butt type, hammer mode and platform preparation, has allowed general trends to be noted. Core typology is set out in Table 3.

TABLE 3: CORE TYPOLOGY

Area	*Single-platform blade core*	*Opposed platform blade core*	*Other blade core*	*Tested nodule*	*Single-platform flake core*	*Multi-platform flake core*	*Discoidal flake core*	*Fragmentary/ unclassifiable core*	*Total*
A	1	3	2	–	1	3	–	–	10
B	–	4	1	9	1	–	1	3	19
Reassessment	–	1	–	1	1	1	–	–	4
Evaluation & Unstratified	–	1	1	3	–	1	–	2	8
Totals	1	9	4	13	3	5	1	5	41

Fig. 7. Distribution of cores and irregular waste in Areas A and B.

Fig. 8. Distribution of core rejuvenation flakes in Areas A and B.

Blade cores are more frequent in Area A, corresponding to a greater proportion of blades and bladelets (see Table 4). Flint-working in Area B seems to have been slightly more haphazard with tested nodules representing approximately 47% of the cores recovered.

TABLE 4: FLAKES, BLADES AND BLADELETS

Area	*Flakes*	*Blades*	*Bladelets*	*Total*
A	598	377	183	1158
B	1378	593	210	2181
Reassessment	101	34	2	137
Evaluation & Unstratified	93	62	1	156
Total	2170	1066	396	3632

The complete cores are fairly small pebbles, the mean core weight is 32.7 g and the mean maximum dimension is 44.1 mm. Generally the cores have been extensively worked, four are completely non-cortical, 16 have between 1–25% cortex cover and only two have between 26–50% cortex remaining. Many of the cores in the second category only have very small areas of cortex remaining. Some would originally have been marginally larger than they are now; several, however, must have been considerably larger. This is attested by occasional flakes and blades of greater length (60–90 mm) than any surviving scars on the cores. The size of some of the core rejuvenation flakes also implies the use of larger nodules. Some incomplete scars on one or two cores were 30–44 mm long, again indicating considerable working down. A flake *c.* 60 mm in length was used as a blade core, the flake itself must originally have been struck from a larger nodule.

Cores were discarded either because no further useful flakes could be removed or because of knapping accidents: unworkable faces caused by successive plunging or hinge fractures, or irregularities in the raw material.

Platform edge abrasion tends to be more common on blade cores (Fig. 12, F19). Edge abrasion removes the overhangs caused by previous removals and strengthens the core.[21]

Flakes and blades from all stages of the reduction sequence were recorded. Wholly cortical flakes are not common. Butts tend to be punctiform or linear[22] and platform abrasion was noted in both Areas.

Cores were rejuvenated by either removing the damaged or unworkable platform (core tablet) or the angle of platform edge and core face (face or edge rejuvenation flakes). Edge rejuvenation flakes are slightly more common in Area A. Three crested flakes were recovered, two from Area B and one from the re-assessment of the whole area. Crested pieces are the product of initial core preparation, although the method can be used at any stage of the reduction process to correct accidents of flaking such as hinge fractures.[23] Of the crested pieces recovered one resulted from initial core preparation and two from Area B were from reshaping the core face.

Chips were recovered in some quantity from the fine mesh sieving (Table 2). The majority are incomplete micro-flakes or portions of larger pieces, only approximately 400 are complete. The chips were concentrated in Areas A and B, with a thin scatter to the N. This distribution largely reflects more extensive sampling of Areas A and B and the greater use of a finer mesh.

The complete chips from two test-pits in Area A and one test-pit in Area B were analysed in detail. Fifty-five complete chips were recorded from test-pits 44822/00662 and 44824/00664 in Area A, 58 chips were recorded from test-pit 44714/00784 in Area B. The samples of complete chips are small, however, complete chips are dispersed spatially throughout the site. The only diagnostic chips are core

[21] R.N.E. Barton, *Hengistbury Head Dorset Volume 2: late Upper Palaeolithic and Early Mesolithic Sites* (1992), 270.
[22] J. Tixier, M.I. Inizan and H. Roche, *Préhistoire de la Pierre Taillée 1 Terminologie et Technologie* (1980), 105.
[23] Barton, op. cit. note 21, 266.

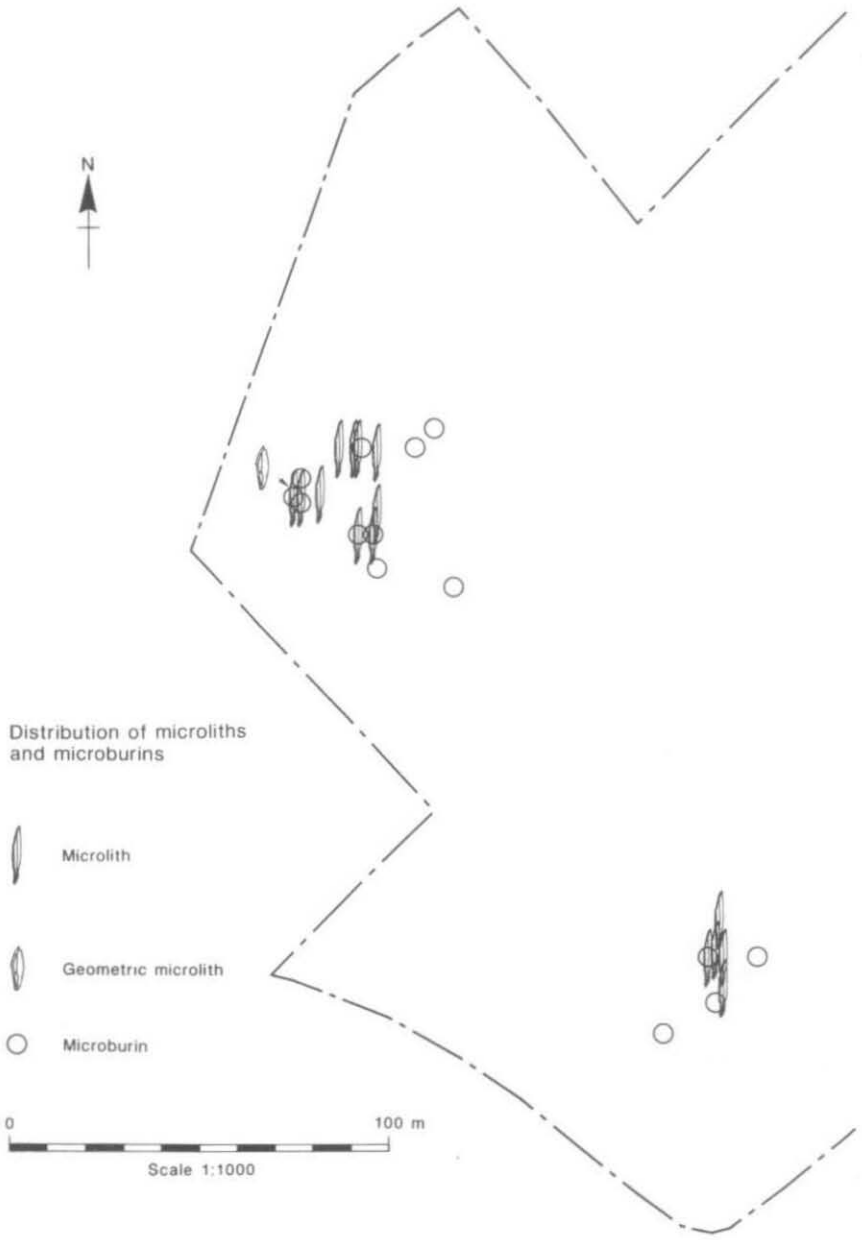

Fig. 9. Distribution of microliths and microburins in Areas A and B.

front chips, classified as having straight profiles, small butts and feathered edges.[24] These chips result from the removal of overhangs from the core platform.[25] The remainder of the complete chips from these test-pits are generally fan-shaped, breadth being their maximum dimension, and they are usually non-cortical. Micro-debitage was recovered from test-pit 44824/00662.

Retouched component

Thirty-nine microliths were recovered; their distribution is plotted in Fig. 9. Only two microliths were found away from the concentrations in Areas A and B; one of these was found in the evaluation at SP 44700/00860 and the other was recovered during the re-assessment at SP 45040/00950. Again this pattern may in part reflect the sampling policy. The distribution of microburins, microliths and the two unsnapped microburins and a possibly unfinished microlith (Fig. 12, F15) attest the on-site manufacture of microliths. Twenty-nine microliths were complete enough for classification, their typology is summarised in Table 5.

TABLE 5: MICROLITH TYPOLOGY

Area	*Obliquely-blunted point*	*Edge-blunted point*	*Scalene triangle*	*Unclassifiable/fragmentary*	*Total*
A	4	5	–	6	15
B	9	8	1	4	22
Reassessment	–	1	–	–	1
Evaluation	1	–	–	–	1
Total	14	14	1	10	39

With the exception of one scalene triangle from Area B all of the classifiable microliths are simple obliquely-blunted or edge-blunted points on proximal truncations.[26] The majority of the broken examples are also probably simple types. Only one microlith retains its bulb (Fig. 11, F9). Six microliths have ancillary trimming.[27] This feature is slightly more common on edge-blunted microliths (3 examples: Fig. 11, F12 and F13, Fig. 12, F14). It also occurs on one obliquely-blunted point (Fig. 11, F7) and two unclassifiable microliths (including Fig. 12, F15). Four of the six microliths with ancillary trimming occurred in Area A, one was from Area B and the remaining example was from the re-assessment. In Area B obliquely-blunted points are proportionally more common (40.9% of the classifiable assemblage as opposed to 26.7% from Area A); edge-blunted points are marginally more common in this Area also (36.4% as opposed to 33.3%).

Although fragmentary, F12, F14 and F15 (Figs. 11–12) are narrower than, for example, F7 (Fig. 11) and may perhaps be later in date. It is possible that F12, F14 and F15 are the tips of larger microliths.

The retouch is generally direct although there is one example with inverse retouch (Fig. 12, F15) and three with bi-directional flake scars, for example, Fig. 12, F14. Bi-directional flake scars may indicate the use of an anvil during manufacture.[28]

[24] M.H. Newcomer and C. Karlin, 'Flint chips from Pincevent', in G. de G. Sieveking and M.H. Newcomer (eds.), *The Human Uses of Flint and Chert* (1987), 33–36.

[25] Ibid. 33.

[26] Clark's typological scheme for microlith classification has been used here, J.G.D. Clark, 'The classification of a Microlithic culture: the Tardenoisian of Horsham', *Archaeological Journal*, 90 (1934), 52–77.

[27] This feature of ancillary trimming can be paralleled at other early Mesolithic sites, for example, Thatcham, Berkshire: J. Wymer, 'Excavations at the Maglemosian Sites at Thatcham, Berkshire, England, *Proc. Prehist. Soc.* xxviii (1962), 343, Fig. 7 nos. 53–4, 59 and 60. Iping Common: P.A.M. Keef, J. Wymer and G.W. Dimbleby, 'A Mesolithic Site on Iping Common', *Proc. Prehist. Soc.* xxxi (1965), Fig. 2 no. 13. Obliquely-blunted points at Oakhanger, a slightly later site, also exhibit this trait: W.F. Rankine, 'A Mesolithic Chipping Floor at the Warren, Oakhanger, Selborne, Hants', *Proc. Prehist. Soc.* xviii (1952), Fig. 3, no. 1.

[28] J. Tixier, *Glossary for the Description of Stone Tools with Special Reference to the Epipalaeolithic of the Maghreb*, Newsletter of Lithic Technology: Special Publication Number 1 (1974), 21.

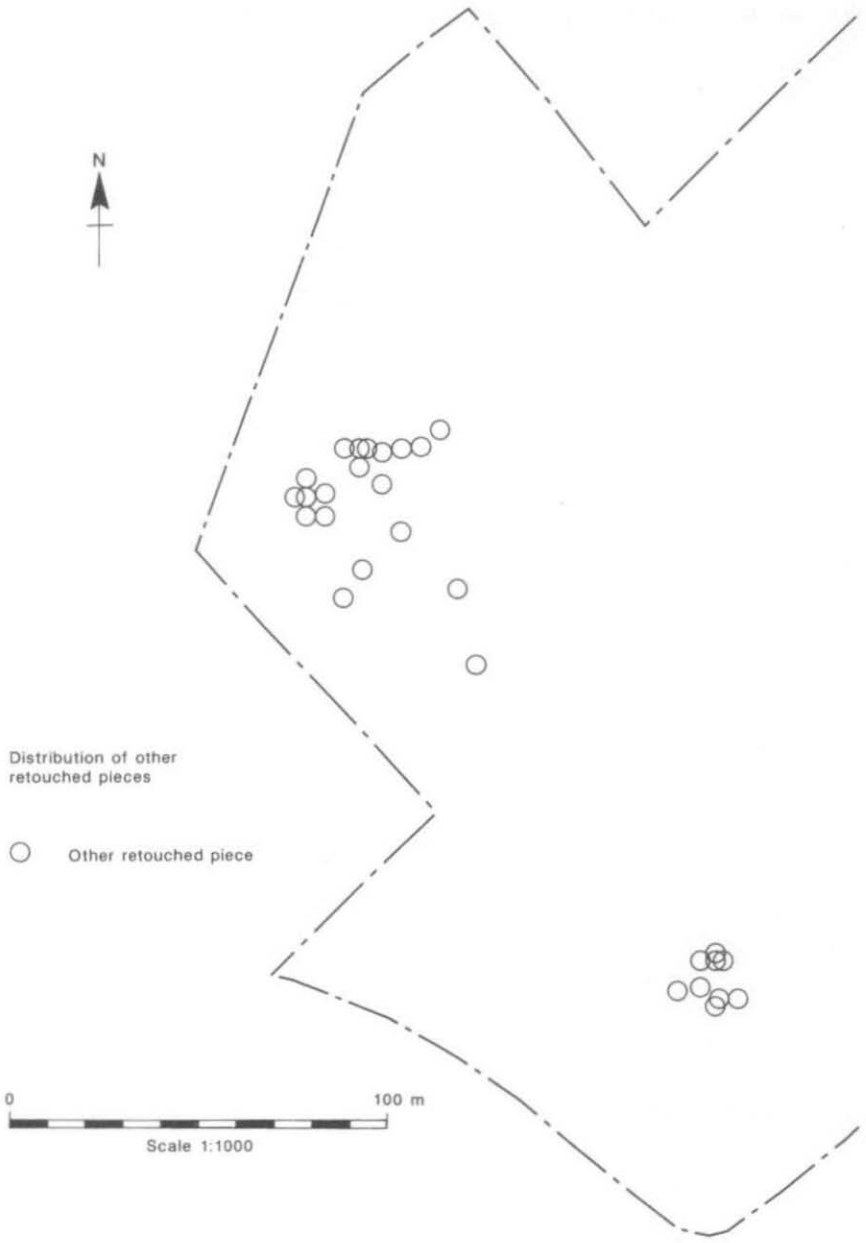

Fig. 10. Distribution of other retouched forms in Areas A and B.

Only eight microliths were complete enough for length, breadth and thickness to be measured (six obliquely-blunted points, one edge-blunted point and the scalene triangle). The obliquely-blunted points have a mean length of 38.2 mm, mean breadth of 9.9 mm and mean thickness of 3.2 mm. The edge-blunted point is slightly smaller, length 32 mm, breadth 7 mm and thickness 3.0 mm. The scalene triangle, typologically later, is 11 mm in length, breadth 3.5 mm and has a thickness of 2.0 mm. Broken pieces were measured for breadth and thickness where possible; the results are generally in line with the complete microliths, between 3 mm and 13 mm broad and 2 mm and 3.5 mm thick. Eleven fragmentary microliths are relatively narrow, between 3 mm and 6.5 mm broad. Of these three are obliquely-blunted points, four are edge-blunted points and four are unclassified. Amongst the unclassifiable and fragmentary microliths, tips are most common (see Table 6).

TABLE 6: FRAGMENTARY/UNCLASSIFIABLE MICROLITHS

Tip	*Mesial*	*Other*	*Total*
6	1	3	10

Thirty-two proximal microburins were recovered. This is to be expected given the dominance of simple obliquely-blunted and edge-blunted points in the assemblage. The majority of the microburins are notched on the left-hand side, like example, Fig. 12, F18; only two examples have been notched on the right-hand side, like Fig. 12, F17. This corresponds to the classified microliths (23 left-hand retouch, 6 right-hand retouch), perhaps indicating right-handed knappers.[29]

Two microburins exhibited straight snaps, indicating that they were mishits. One microburin, initially notched on the left-hand side, has been subsequently notched on the right-hand side. It is likely that the initial notch failed to snap and a second attempt on the right-hand side was made to produce the desired blank. There were two unfinished microburins, these are both notched pieces that have not been snapped to form the oblique truncation. One had been broken during initial notching and the distal end of the other example had broken before the microburin could be completed. The micro-burin facet is still recognisable on one obliquely-blunted point, Fig. 11, F6.

The size of the microburins varies considerably (length 17–6 mm). The mean breadth (7.3 mm) and thickness (2.3 mm) of the microburins compares well with the measured microlith data suggesting that standardised types of blank were chosen for microlith manufacture.

Two Krukowski microburins were recovered; these are the result of flaking accidents when retouching.[30] Both examples exhibit retouch along one side and a microburin-like facet on the ventral face.

The other retouched forms present are generally consistent with the date of the majority of the assemblage. However, there are one or two exceptions. The retouched component is summarised in Table 7 and plotted in Fig. 10.

TABLE 7: RETOUCHED FORMS

Area	*Microlith*	*Scraper*	*Borer*	*Microdenticulate*	*Backed flake*	*Truncated piece*	*Transverse arrowhead*	*Miscellaneous retouch*	*Total*
A	15	1	–	8	6	1	–	1	32
B	22	7	2	9	2	–	–	10	52
Reassessment	1	–	–	1	–	–	1	1	4
Evaluation & Unstratified	1	2	–	2	–	–	–	–	5
Total	39	10	2	20	8	1	1	12	93

[29] The position of retouch has been linked to 'handedness', Barton, op. cit. note 21, 234.

[30] Barton, op. cit. note 21, 234.

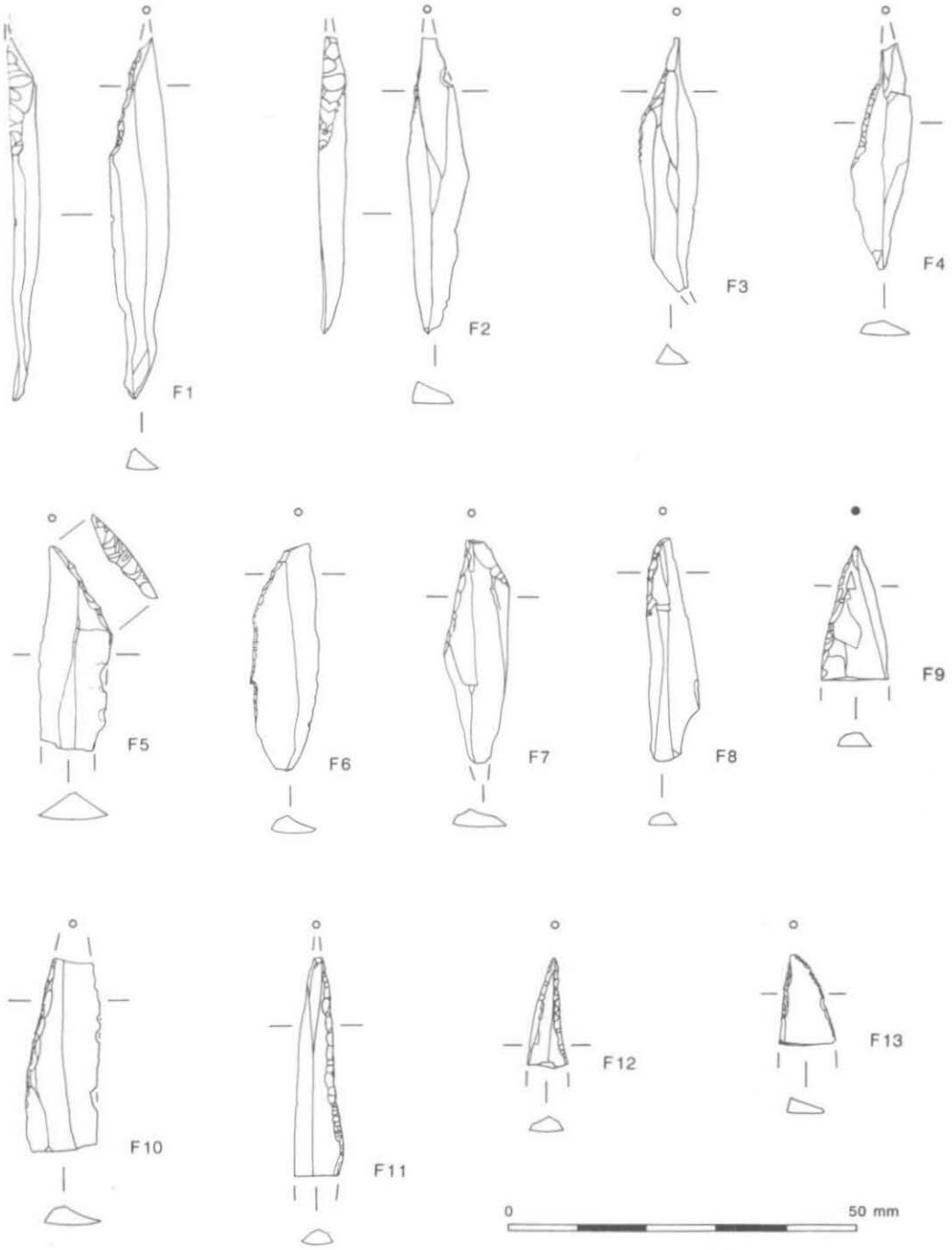

Fig. 11. Microliths from Areas A and B. 1:1. ° bulb removed, • bulb present.

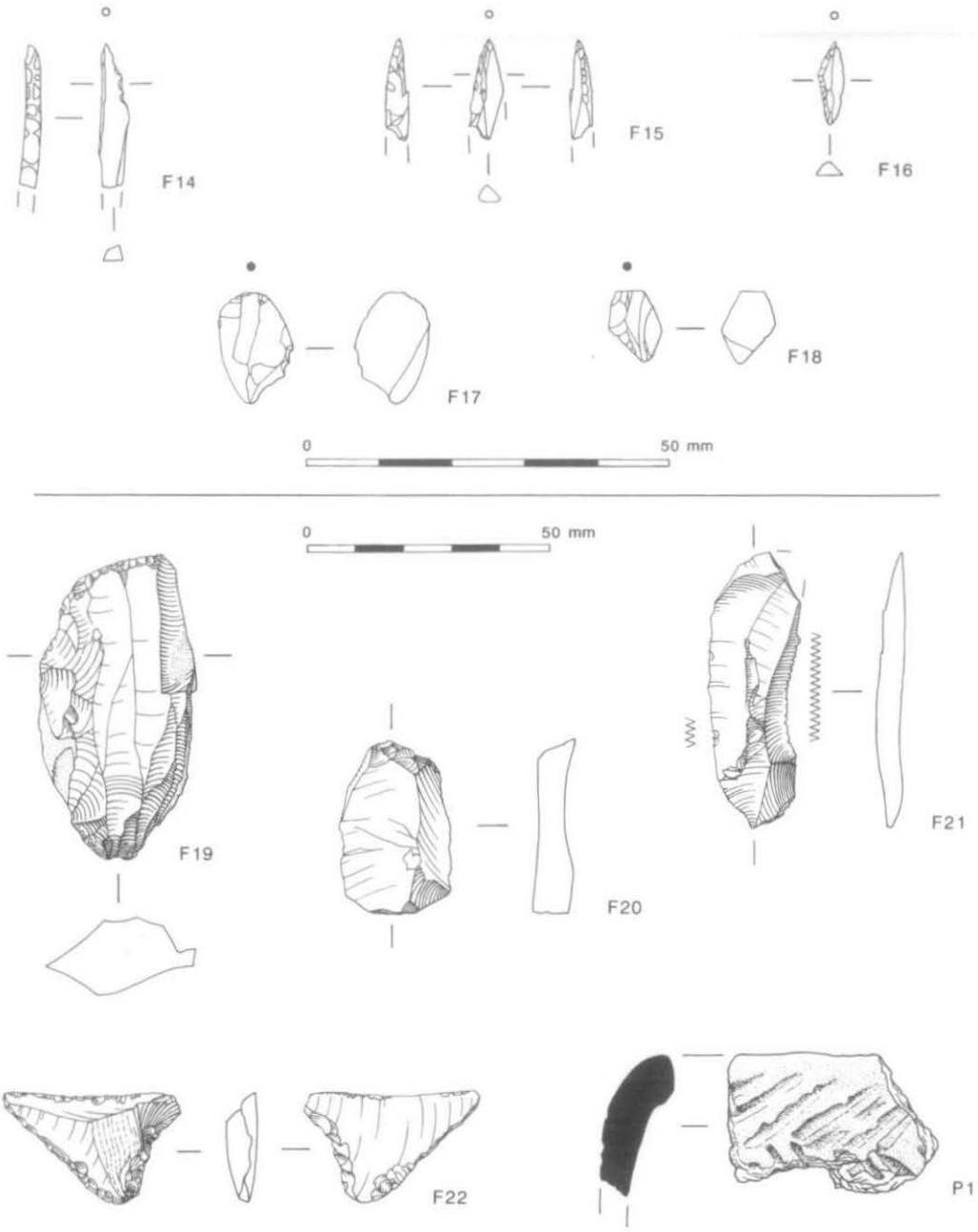

Fig. 12. Struck flint from Areas A and B; Grooved Ware from Area B. F14–18 1:1; F19–22 and P1 1:2.

Flake scrapers and scrapers on the end of flakes or blades are both represented in the assemblage (Fig. 12, F20). End and side scrapers are most frequent, simple end scrapers were also recovered. The majority of the blanks are relatively thick and several examples retain some cortex. Retouch is usually direct, semi-abrupt; one end scraper is inversely retouched. Scraping angles vary between 50° and 75°. A retouch chip from a scraper was found in Area B in Area B at SP 44735/00796.

Two borers were recovered from Area B. One had been made on the proximal end of blade *c.* 67 mm in length. The point was worn. The other example is on a flake.

The microdenticulates[31] tend to be made on blades and to have a slightly concave longitudinal section. These pieces are often non-cortical and blanks seem to have been chosen with some care (Fig. 12, F21). The backed flakes do not seem to be characterised by any special type of blank. The retouch is continuous and semi-abrupt and occurs on one lateral edge; one backed flake has inverse retouch. Both blades and flakes were used as blanks. A single truncated piece was recovered from Area A. It is formed by semi-abrupt retouch obliquely truncating the blade. No burins, heavy tools or axe sharpening flakes were found.

The miscellaneous retouched pieces include fragmentary types or atypical examples which cannot be classified, among them a possible tanged flake.

Some differences between the two areas can be noted. Microliths, microdenticulates and backed flakes are more frequent in Area A, while the retouched assemblage from Area B is dominated by scrapers and miscellaneous retouched pieces (Table 7). Interestingly, proportionally more microburins were recovered in Area B where a slightly lower percentage of finished microliths were found. This may simply be due to recovery methods, more finer mesh sieving having been undertaken in Area B. A transverse arrowhead (Fig. 12, F22) was recovered from SP 44930/00880 during the reassessment of the area under threat.

Dating

The dominance of large, simple obliquely-blunted and edge-blunted points would indicate an earlier Mesolithic date for the majority of the assemblage. Mean measurements for the Tubney microliths are in the same size range as those for the early Mesolithic industries of Kelling Heath, Iping (Fitzhall) II, Greenham Dairy Farm and Thatcham IIIA.[32] Some of the larger examples from Tubney (for example Fig. 11, F1 and F2) are virtually indistinguishable from obliquely-blunted points from Oakhanger and Thatcham.[33] The smaller size of a minority of the microliths, for example F12, F14 and F15, may point to a rather later date for some of the material,[34] while the single scalene triangle (Fig. 12, F18) is typologically later Mesolithic in date.[35]

The transverse arrowhead shows that some late Neolithic flintwork is present. This is confirmed by the late Neolithic pottery (see Barclay below). Some of the scrapers may be post-Mesolithic, as may the possible tanged flake and a discoidal flake core. The possibility that more of the flintwork may belong to a later date should not, therefore be ruled out.

It was hoped to date some of the burnt flint by thermoluminescence dating.[36] However, after careful consideration it was decided that the scatters were too disturbed to justify dating and that several periods of activity are represented.

[31] A blade or blade-like blank, often with a concave profile, one or occasionally both lateral edges have been contiguously notched.

[32] M.W. Pitts and R.M Jacobi, 'Some Aspects of Change in Flaked Stone Industries of the Mesolithic and Neolithic in Southern Britain', *Journal of Archaeological Science*, vi (1979), 166–70.

[33] Pers. obs.

[34] Pitts and Jacobi, op. cit. note 32, 169.

[35] R.M. Jacobi, 'Britain Inside and Outside Mesolithic Europe', *Proc. Prehist. Soc.* xlii (1976), 67–84.

[36] We are grateful to Professor Tite of the Research Laboratory for Archaeology and the History of Art, Oxford for discussing the possibility of TL dating.

Catalogue of illustrated pieces

Entries are ordered as follows : category, brief description, condition, grid reference and layer. LHS = left-hand side; RHS = right-hand side

F1. Microlith. Obliquely-blunted point. Very lightly corticated. 44715/00784 Layer 6.

F2. Microlith. Obliquely-blunted point. Recent damage to RHS. Lightly corticated. 44715/00784 Layer 4.

F3. Microlith. Obliquely-blunted point. Lightly corticated. 44730/00797 Layer 5.

F4. Microlith. Obliquely-blunted point. Medium cortication. 44824/00664 Layer 1.

F5. Microlith. Obliquely-blunted point, retouched RHS. Small patch of cortex on dorsal face. Recent damage to RHS. Lightly corticated. 44714/00784 Layer 8.

F6. Microlith. Obliquely-blunted point, fine retouch occurs down most of LHS. Snap facet visible. Heavily corticated. 44715/00784 Layer 5.

F7. Microlith. Obliquely-blunted point with ancillary retouch RHS. Lightly corticated. 44734/00774 Layer 3.

F8. Microlith. Edge-blunted point. Lightly corticated. 44714/00784 Layer 4.

F9. Microlith. Edge-blunted point. Bulb intact. Medium cortication. 44714/00784 Layer 3.

F10. Microlith. Edge-blunted point. Heavily corticated. Recent damage to RHS. 44714/00784 Layer 3.

F11. Microlith. Edge-blunted point, retouched along most of RHS. Very lightly corticated. 44826/00663.5 Layer 2.

F12. Microlith. Edge-blunted point with ancillary retouch. Medium cortication. 44825/00672 Layer 1.

F13. Microlith. Edge-blunted point, with ancillary retouch. Medium cortication. 45040/00950 Layer 1.

F14. Microlith. Edge-blunted point. Bidirectional flaking. Ancillary retouch RHS. Medium to heavy cortication. 44715/00784 Layer 8.

F15. Microlith. Broken ? during manufacture. Abrupt retouch LHS, RHS inversely retouched. Medium cortication. 44822/00662 Layer 1.

F16. Microlith. Burnt. Scalene triangle. 44713/00784 Layer 5.

F17. Microburin. Proximal notch RHS. Very lightly corticated. 44714/00784 Layer 6.

F18. Microburin. Proximal notch LHS. Heavily corticated. 44735/00765 Layer 1.

F19. Opposed platform blade core. Platform edge abraded. Some cherty inclusions. Light to medium cortication. 44715/00784 Layer 6.

F20. End scraper. Burnt. Steeply retouched 60–75°. Lightly corticated. 44715/00784 Layer 4.

F21. Microdenticulate. Minute denticulations occur along part of LHS and most of RHS. Lightly corticated. 44820/00662 Layer 3.

F22. Transverse arrowhead. Recent damage to primary edge, area of heavy cortication on dorsal face ? flake struck from an old nodule. 44930/00880 Layer 2.

POTTERY

Late Neolithic pottery by ALISTAIR BARCLAY

Description

Six sherds of late Neolithic pottery were recovered during the excavations. A rim fragment (P1) from a tree-throw hole was in a better condition than the other sherds which were recovered from the ploughsoil (layer 3).

P1 (Fig. 12). 44843/00657 layer 5. Two joining sherds from a decorated, internally bevelled rim. Grooved decoration forms a herringbone motif. The breaks and damage are fresh. Fabric: GQ Soft fabric with common (10–15%) sub-angular grog and quartz sand. Ext: reddish brown; C: black; Int: black. Condition: good.

P2. 44730/00781 layer 3. A fragment from a ? bevelled rim. Fabric: GQ. Ext: yellowish brown; C: black; Int: yellowish brown. Condition: fair.

Three further body sherds, in similar grog fabrics came from 44835/00657 layer 3 and 44735/00775 layer 3. One sherd from 44835/00657 layer 3 was decorated with oblique parallel incised lines.

Discussion

The fabric, rim forms and decoration of P1–2 are consistent with late Neolithic Grooved Ware in the Upper Thames Region and the rim, P1, has affinities with the Durrington Walls sub-style of Grooved Ware.[37] The remaining body sherds are consistent with this date. Within the Upper Thames Region Grooved Ware in this sub-style has been excavated at Thrupp Farm, Radley,[38] Ashville, Abingdon,[39] Barton Court Farm, Abingdon,[40] Didcot[41] and Stanton Harcourt.[42]

The Grooved Ware pottery tradition belongs to the middle of the 3rd millennium cal BC. Within the Upper Thames Region the only available ^{14}C determinations are associated with the Woodlands rather than the Durrington Walls sub-style.

Iron Age and later pottery by PHILIPPA BRADLEY[43]

Approximately 550 sherds of later pottery were recovered (Table 8). Many of the sherds are very small and abraded; dating is therefore difficult. There were a few middle to late Iron Age sherds. Most of the Roman sherds are reduced coarse wares which are not closely datable. Distinctive late Roman material, however, seems to be lacking. The medieval pottery is mainly 12th and 13th century in date.

TABLE 8: POTTERY

Late Neolithic	*Iron Age*	*Roman*	*Medieval*	*Post-medieval*	*Indeterminate*	*Total*
6	22	102	283	129	12	554

SMALL FINDS by PHILIPPA BRADLEY

A number of small finds were recovered. These were relatively undiagnostic (Table 9). The majority came from ploughsoil layers. A post-medieval date would not be out of place for at least some of this material. The window came may be medieval in date. Clay pipe fragments and post-medieval glass were also recovered in some quantity. The most notable small find is an Elizabeth I (1558–1603) silver penny (SF 8150).[44] The mint mark is illegible and therefore the date is uncertain.

[37] I.H. Longworth, 'The Neolithic Pottery', in G.J. Wainwright and I.H. Longworth, *Durrington Walls Excavations 1966–1968*, Reports of the Research Committee of the Society of Antiquaries of London no. xxix (1971).

[38] R. Thomas and J. Wallis 'Recent Work on Neolithic and Early Bronze Age Sites in the Abingdon Area', *CBA 9 Newsletter*, 12 (1982), 184.

[39] C. Balkwill, 'Appendix 1: A Pit with Grooved Ware from Abingdon', in M. Parrington, *The Excavation of an Iron Age Settlement at Ashville Trading Estate, Abingdon (Oxfordshire) 1974–76* (OAU Report 1, CBA Research Report 28, 1978), 31–3.

[40] A.W.R. Whittle, 'The Neolithic Finds', in D. Miles (ed.), *Archaeology at Barton Court Farm, Oxon* (OAU Report 3, CBA Research Report 50, 1986) 3:A14.

[41] A.J. Barclay 'The Prehistoric Pottery', in A. Boyle and A. Mudd, *An Anglo-Saxon Cemetery at Didcot, Oxfordshire* (forthcoming).

[42] R. Cleal, 'The Earlier Prehistoric Pottery', in T. Allen, F. Healy and G. Lambrick, *Gravelly Guy, Stanton Harcourt, Oxfordshire* (in prep.). N. Thomas, 'Excavations at Vicarage Field, Stanton Harcourt, 1951', *Oxoniensia*, xx (1955), 1–29.

[43] We are grateful to Paul Booth (OAU) for identifying the Iron Age and later pottery.

[44] We are grateful to Nicholas Mayhew for identifying the coin.

TABLE 9: SMALL FINDS

Grid reference	*SF number*	*Iron objects*	*Copper alloy objects*	*Lead objects*	*Glass object*	*Other*
44729/00792/3	7847	–	–	fragment	–	–
44735/00775/1	8150	–	–	–	–	silver Elizabeth I penny
44730/00781/1	8151	–	strip serrated along one edge	–	–	–
44715/00784/1	8152	–	–	cartridge casing	–	–
44720/00785/1	8153	–	hook from hook and eye fastening	–	–	–
44745/00767.5/3	8154	nail fragment	–	–	–	–
44720/00785/3	8155	nail fragment	–	–	–	–
44755/00762/1	8156	–	–	–	–	shotgun cartridge
U/S	8157	–	–	–	bottle stopper	–
44729/00792/2	8158	nail fragment	–	–	–	–
44715/00779/1	8159	nail	–	–	–	–
44755/00784/2	8160	nail	–	–	–	–
44735/00775/2	8161	L-shaped strip	–	–	–	–
44729/00797/2	8162	2 nails	–	–	–	–
44715/00784/2	8163	strip	–	–	–	–
44900/00820/4	8165	nail	–	–	–	–
45000/009900/4	8166	nail	–	–	–	–
45040/00950	8167	–	–	window came	–	–
44735/00770/1	8168	nail fragment	–	–	–	–
Total		12	2	3	1	2

DISCUSSION

The pollen sequence established at Cothill Fen, only 2 km SE of the site, provides evidence for the vegetation of the Corallian ridge from the Pre-Boreal to the Atlantic period. Pollen from this site has recently been re-investigated by Petra Day.[45] During the Pre-Boreal the tree pollen indicates an open woodland dominated by birch; willow and pine were also present. At around 9500 BP a rise in pine, hazel and elm pollen occurred, birch and willow declined, and by the second part of the Boreal oak appeared. The main occupation(s) of the Tubney site would have fallen within this period. From about 8800 to 6850 BP oak and hazel increased in importance at the expense of pine and probably elm. At the end of this period lime and alder were also present.

The area would have been eminently suitable for occupation, the resources of the woodlands, the fen margins and the rivers providing a broad subsistence base. The site location on higher ground, overlooking the Upper Thames Valley, would, in addition, have provided an excellent vantage point.

An unusual feature of the Cothill sequence, which has not been found in other contemporary Oxfordshire deposits, like that at Sidlings Copse, Shotover, is the continuing presence of pine pollen to about 7700 BP.[46] Large quantities of charcoal were also present in all cores from 8800 to 7700 BP, ceasing to occur at the same time as pine disappears from the pollen record. Day believes these two events to be related; the late survival of pine being due to disruption of the canopy, probably the result of anthropogenic interference, which

[45] S.P. Day, op. cit. note 9, 445–70.
[46] Ibid. 465.

reduced competition from more shade-tolerant deciduous taxa. The charcoal could have been the result of forest clearance or nearby domestic fires. Forest clearance associated with Mesolithic activity has been suggested elsewhere in Britain, for example Thatcham, Berkshire[47] and Peacocks Farm, Cambridgeshire.[48] It is, of course, impossible to infer a relationship between the Cothill pollen evidence and Mesolithic activity at Tubney. The evidence from Cothill does, however, provide an intriguing indication of the effects of Mesolithic populations in the area.

The majority of the flint assemblage is of early Mesolithic character (i.e. likely to date from *c.* 9800–8500 BP) although there is at least some later Mesolithic and Neolithic material (see above).

The industries from Areas A and B both fall into Mellars' 'balanced' assemblage category.[49] The proportions of scrapers from each area (Area A, 4.1% of the essential tool total, Area B 18.4%) are lower than any of the assemblages so classed by him. Conversely, microdenticulates are rather more important, forming 33.3% (Area A) and 23.7% (Area B) of the essential tool total.

Mellars found an association between overall assemblage composition, site location and function. 'Balanced' assemblages are frequently found in river valley locations although there are some upland and coastal sites. These sites are thought to have been occupied during the winter when various resources would have been available. These include shelter, herd animals such as red deer tending to congregate in these locations, and the availability of winter fishing. Vegetation at these locations would have been relatively abundant too.[50] The site at Tubney would have been well placed to take full advantage of those resources and may represent a winter base camp.

A range of functions were probably carried out on the site, as indicated by the retouched component of the assemblage. Microliths and microburins have a coincident distribution, indicating *in situ* microlith manufacture. Until recently microliths were seen as an indication of the importance of hunting in the Mesolithic. However, the function of microliths as projectile armatures has been questioned; the predominance of microliths in an assemblage may not therefore simply equate with hunting.[51] Other activities possibly represented at Tubney are hide preparation (scrapers, borers) and food preparation (microdenticulates, ? backed flakes). The high proportions of microdenticulates in the essential tool total may reflect the importance of plant food processing to Mesolithic communities.[52]

Although no evidence for burnt areas or fires was found in the excavations, the quantities of both burnt worked flint – nearly a quarter of the total (Table 1) – and burnt unworked flint (Fig. 6) suggests that fires were repeatedly lit on the site. Provided that the burning does not post-date the artefacts, this would in turn suggest repeated and/or extended occupation, rather than brief, task-specific episodes. The extent of the site, the overall quantity of

[47] R.G. Scaife, 'Pollen analysis', in F. Healy, M. Heaton and S.J. Lobb, 'Excavations at Thatcham, Berkshire', *Proc. Prehist. Soc.* lviii (1992), 67.

[48] A.G. Smith, A. Whittle, E.W. Cloutman and L.A. Morgan, 'Mesolithic and Neolithic Activity and Environmental Impact on the South-east Fen-edge in Cambridgeshire', *Proc. Prehist. Soc.* lv (1989), 236–49.

[49] P. Mellars, 'Settlement Patterns and Industrial Variability in the British Mesolithic', in G. de G. Sieveking, I. Longworth and K.E. Wilson (eds.), *Problems in Economic and Social Archaeology* (1976), 386.

[50] P. Mellars, op. cit. note 49, 391–4.

[51] R. Grace, 'The Use Wear', in F. Healy, M. Heaton and S.J. Lobb, 'Excavations at Thatcham, Berkshire', *Proc. Prehist. Soc.* 58 (1992), 70; J. Dumont, 'Star Carr: the results of a microwear study', in C. Bonsall (ed.), *The Mesolithic in Europe* (1985), 231–40.

[52] The importance of plant foods to hunter-gatherers in temperate latitudes is widely reported, see for example, P. Mellars, op. cit. note 49, and D.L. Clarke, 'Mesolithic Europe: The Economic Basis', in G. de G. Sieveking, I.H. Longworth and K.E. Wilson (eds.), *Problems in Economic and Social Archaeology* (1976).

material, the range of implement types and the location of the site would all accord with this. The possibility of successive episodes of activity is reinforced by typological and technological differences between the two areas.

Early Mesolithic flint has been found along the Corallian ridge at Shotover, Wootton and Cumnor. Shotover has produced a fairly large assemblage, including obliquely-blunted points; the other sites are represented by stray finds. Further stray finds have been made at Lambourn, East Garston and Fawley.[53] Nettlebed, on the Chilterns, has also produced early Mesolithic flint and may have been associated with flint collecting. Obliquely-blunted points and heavy tools were recovered along with quantities of debitage.[54] The early Mesolithic sites tend to occur on higher ground such as the Corallian ridge or the Chilterns. The larger sites such as Shotover and Nettlebed occupied similar locations to Tubney.

The later Mesolithic and late Neolithic components of the collection, while not quantifiable, are undoubtedly much slighter. Subsequent activity is indicated by Roman and medieval pottery, which has been interpreted as the result of manuring arable fields from adjacent contemporary settlements.[55] Ploughing has undoubtedly disturbed the Mesolithic flint scatters, though this does not appear to have completely dislocated the original distribution patterns.

ACKNOWLEDGEMENTS

The fieldwork and post-excavation analysis were entirely funded by Hills Aggregates Ltd, the developer, for which the Oxford Archaeological Unit is very grateful. The landowners, Magdalen College, kindly granted access to their land and to records held in their archives and have agreed to the deposition of the finds with the Ashmolean Museum.

The assessment was directed by R.A. Chambers (OAU). The fieldwork was directed by Gill Hey (OAU) and supervised by Mark Roberts (OAU); Mark Roberts also commented on an earlier draft of the report. Thanks are due to the excavators of the OAU who showed patience and perseverance in sometimes trying conditions on site.

The illustrations are the work of Gill Hale (OAU) (Figs. 1–3 and 11–12) and Bob Whiteman (OAU) (Figs. 4–10). Nicholas Mayhew (Ashmolean Museum) identified the coin. Catherine Underwood-Keevill (OAU) commented on the small finds.

We would like to thank Andrew Brown of English Heritage and John Castleford of the Quaternary Research Centre, Oxford for comments and advice during the course of the excavation.

Alison Roberts (British Museum), Leslie Cramm (Reading Museum) and Karoline Legel (Ashmolean Museum) very kindly gave access to their Mesolithic flint collections. Alison Roberts and Frances Healy provided invaluable advice on aspects of the flint assemblage. Steve Ford advised at an initial stage of analysis. We are also grateful to Petra Day for providing information on her pollen analysis and discussing the implications of the results.

This paper was published with the aid of a grant from Hills Aggregates Ltd.

[53] H. Case, op. cit. note 4, 18.

[54] A.E. Peake, 'A Cave Site at Nettlebed, South Oxfordshire', *Proc. Prehist. Soc. East Anglia*, ii (1917–18), 71–80.

[55] G. Briggs et al., op. cit. note 4, 58–63 and 185–8.