LOCATING, EVALUATING AND INTERPRETING LITHIC SCATTERS: THE ETON ROWING LAKE EXPERIENCE
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SUMMARY
This paper sets out some of the problems encountered in evaluation and excavation of lithic scatters within a large riverside landscape site in the Middle Thames valley, from which approximately 50,000 struck flints have been recovered to date. The methodologies evolved to deal with these are described, and comments are made upon the lessons that have been learnt.

INTRODUCTION
Construction of a rowing lake of international standard for Eton College has begun at Boveney Court, Dorney, Eton (SU 919/787 to SU 937/774). The site, which lies on the north bank of the river Thames, is over 2 km long and up to 700 m wide, and covers approximately 150 hectares of fairly level, low-lying ground. The underlying geology consists of gravel terrace deposits crossed by former wide palaeochannels incised in the Late Devensian, some of which remained active into the historic period (Fig. 1).

ARCHAEOLOGICAL BACKGROUND
The site was first identified from aerial photographs. Following the recognition of a series of cropmark sites it was fieldwalked by Philip Carstairs for Buckinghamshire County Council in 1985, and a spread of Neolithic and Bronze Age material was found across the gravel terrace areas of the site. Two areas of probable Mesolithic activity were also identified, but no collection was undertaken. The results were summarised in a report highlighting the potential of the area (Carstairs 1986).

In 1987 the Oxford Archaeological Unit (hereafter OAU) was asked to evaluate the archaeology of the site prior to an application for planning permission. The topography was mapped from aerial photographs taken in the summer months, which show clearly the difference between the gravel terrace areas, whose vegetation becomes parched, and the former channels and alluvial floodplain areas, which remain dark (Fig. 2). Nearly half of the site consists of former channels, some of which are more than 400 m across. While the lines of these channels are still visible as depressions on the ground in some places, elsewhere a combination of erosion by ploughing and the deposition of alluvium have made them invisible, and a detailed contour survey was therefore not undertaken.

Limited trial trenching in 1987 and again in 1990 concentrated on the cropmark sites, which were identified as two areas of co-axial Middle-Late Bronze Age field system, a Bronze Age barrow cemetery and a Roman enclosed farmstead (Fig. 1). A further cropmark just north-west of the site is believed to be a Neolithic causewayed enclosure, though this area was not suitable for fieldwalking, and limited evaluation in the adjacent part of the site (Fig. 3) did not confirm this.

On the gravel terraces the early Holocene soils had been thoroughly ploughed, and only survived in occasional depressions in the gravel, and in the top of a silted Late Pleistocene channel that crossed the south-east half of the site. Within this a scatter of struck flint, some of it blade-like, was found adjacent to the Bronze Age barrows (Fig. 1). The few trenches dug into alluvial areas appeared to indicate poor organic preservation of early post-glacial date. Struck flint and pottery of Bronze Age date was found within the upper part of the overlying sediments, some of which were alluvial, but was interpreted as derived from the adjacent gravel terraces by ploughing and erosion.

THE DETAILED FIELD EVALUATION
Following the granting of planning permission for the Rowing Lake in 1993 a more detailed evaluation by trenching was undertaken in 1994 and 1995. Further fieldwalking was not undertaken, since by this time the site had been Set-Aside. A total of 150 further evaluation trenches varying from 10 m to 120 m in length were dug to investigate the blank gravel terrace and alluvial areas. Together with the earlier evaluation these constitute a 1.2% sample of the threatened area of the site (see Fig. 3).

The trenches were positioned to cut across the junctions of different topographic zones and were dug in parallel lines across the wide palaeochannels. These showed that the site consisted of not two but three principal zones: permanently dry gravel terrace ‘islands’, silted Late Pleistocene channels that became alluvial floodplain by the Neolithic, and narrower but deeper palaeochannels that were still active into the Roman period.

Further trenching on the gravel terraces generally revealed the same deep ploughing as in the earlier evaluations, though large patches of preserved early Holocene soil were found in the vicinity of the
Figure 1: Plan of the site showing its location, the prehistoric topography and cropmarks.

Possible causewayed enclosure

Cress Brook channel

Bronze Age enclosures

Barrow enclosures

Terrace

Former Thames channel

Cropmarks

Areas of Mesolithic activity

Alluvial flood plain

Channels active after 4000 BC

0

1000 m
silted Late Pleistocene channel in the middle of the site. Within one of these a scatter of Early Neolithic struck flint and pottery was only partly disturbed by later ploughing. At the south-east end of the site further evaluation in and around the silted Late Pleistocene channel revealed a scatter of flint including microliths of Mesolithic date. Elsewhere struck flints were only found within features or in ploughsoils.

Subsequent area excavation showed that two large spreads of well-preserved Early Neolithic artefacts and ecofacts were preserved within the hollow in the top of the silted Late Pleistocene channel. In Area 10 c 375 sq m of the soil in the hollow was excavated, from which 2600 struck flints and 2000 sherds of Neolithic pottery were recovered; in Area 6 some 21,000 struck flints, 7000 sherds of Earlier Neolithic pottery and over 1,100 fragments of animal bone were recovered from 690 sq. m of the hollow (see Cover Photograph). Smashed bowls and cores and flakes of the same raw material show that the material has been very little disturbed since deposition, and sieving of soil samples has recovered variable amounts of microdebitage, suggesting a mixture of in situ knapping and dumped material. These sites are interpreted as midden deposits within a settlement.

In retrospect, it was a matter of chance whether a conventional evaluation trenching strategy would have identified the middens, both of which consisted of extensive spreads but with varying density of finds. Three evaluation trenches were dug across the hollow in Area 6 in which the Neolithic activity lay, but all happened to fall in areas of relatively low artefact density and without diagnostic flints or potsherds. Due to Carstairs' identification of Mesolithic material from fieldwalking in this area (Carstairs 1986, 163), blade-like flints found in the trenches were interpreted as Mesolithic. Neolithic surface spreads as extensive as those found at this site were virtually unknown, and given the proximity of the Bronze Age barrows, and that the hollow was seen as a trap for finds from the surrounding area, the material found within the evaluation did not seem exceptional.

At the edge of the gravel terraces and the alluvial floodplain trenching identified an Early Mesolithic site running beneath alluvium on the slope at the edge of Basin R (Fig. 1). This was traced by digging several trenches to establish the extent of the scatter, which proved to cover an area of approximately 2500 sq. m. The scatter did not extend far out into the former channels, and had no direct relationship to the waterlogged peat deposits which were found below alluvium, but environmental sampling showed that the earliest peat deposits also formed during the Early Mesolithic. Peat continued to accumulate under 'carr' conditions during the Later Mesolithic until a true floodplain developed. Several spreads of burnt flint and charcoal were found elsewhere along the edges of the gravel terrace, similar in character to 'burnt mounds' of Bronze Age date.
Figure 3: Plan of the site showing the location of evaluation trenches in relation to the cropmarks and topography:

- alluvial flood plain
- gravel terraces
- channels active after 4000 BC
- cropmarks

- Cress Brook channel
- Boveney

evaluation trenches
edge of rowing lake

0 1000 m
Across the alluvial zone trenches were originally placed at wide intervals in parallel lines, and were only 10 m long. In these trenches however flint scatters ranging in date between the Late Mesolithic/Early Neolithic and the Middle/Late Bronze Age were found at a variety of levels within a 1 m build-up of alluvium overlying the alder carr. Some of these flint scatters were very dense (upwards of 40 struck flints per m²), and several of these were very restricted in area, and were clearly in situ. It became clear that there were not only sites sealed beneath later alluvium, as is the case at Yarnton, Oxfordshire (see Hey this volume), but also a series of occupation horizons within the alluvial build-up representing intermittent use of the floodplain over a long period of time (Fig. 5).

Considerable variation was found in the sequence of deposits between the trenches, and in order to evaluate the full depth of waterlogged and alluvial deposits (up to 2.6 m in places), it became necessary either to shore the trenches or to dig larger stepped trenches. The trenches were therefore extended to 30 m (or more) in length, and were boxed out at one or both ends to examine the waterlogged peat deposits at the bottom of the sequence. Linking these trenches provided long (if intermittent) sections across the floodplain and channels, though the exposure of the lower deposits was in retrospect too limited.

The longer evaluation trenches showed that there were narrower palaeochannels within the Pleistocene basins, some of which remained active into the Roman period. One of these has proved to have at least seven phases starting in the late Mesolithic. The size of this channel and the character of its sediments show that this was a major channel of the river Thames in prehistory. The river gradually migrated across the Pleistocene basin, with the result that the sediments infilling each phase were preserved beneath the bank of the next, thus providing the potential for examining a succession of bankside zones of different dates. Both flint scatters and burnt flint spreads were found close to the banks of the palaeochannels.

PROBLEMS AND POTENTIAL ON THE FLOODPLAIN
Lithic scatters on the alluvial floodplain at this site have the potential to yield considerable information, since both the concentration and the limited extent of some of these, as well as the presence of microdebitage and of refitting flakes, show that many scatters are preserved in situ beneath later alluvium. Locating these, however, is problematic.

Occupation horizons within the alluvium are not usually evident to the naked eye from changes in the soils. In some trenches where flints were very numerous the horizons at which they were found were accompanied by pottery, animal bones, hearths or charcoal spreads, or were marked by darker soil caused by concentrations of manganese, which is attracted to humic material and can indicate former turf lines (Fig. 5). These darker soil horizons were, however, usually of restricted extent, not occurring in adjacent trenches, and in some cases were absent. Where the flint scatters represented a single knapping event there was rarely any other occupation material.

For these reasons even during area excavation it has not been easy to follow buried horizons, and the artefacts themselves have acted as the best guide to buried land surfaces. For evaluation it has been pure chance whether trenching has located an area of lithic activity.

Paradoxically, however, the problem during evaluation was not finding struck flint, but interpreting the significance of what was found. Excluding the Early Mesolithic site described above, more than 2500 struck flints were found in the detailed evaluation, and almost every trench dug into the alluvial build-up on the floodplain found small numbers of struck flints, usually at several levels. Initially machining was stopped at the first horizon at which artefacts were found, but hand-excavation only occasionally revealed concentrations of struck flint. Subsequently, area excavation of large parts of the floodplain (Fig. 4) has shown that there is an hierarchy of lithic activity on the buried land surfaces: in some areas there is nothing, in others there is a sparse scatter of struck flint over a wide area, some areas contain dense clusters of struck flint of restricted area (less than 2 m square), which are identified as single knapping episodes, and others more extensive (but still dense) spreads interpreted as ‘activity areas’.

This hierarchy of lithic sites has not been defined quantitatively, but is well illustrated on area EX1, where examination of 1 ha. of the floodplain revealed sixteen discrete lithic clusters less than 2 m across, and one area 25 by 30 m containing arcs of overlapping flints 4-5 m long around a central burnt area, and surrounded by satellite small clusters each less than 2 m square (Fig. 6). A thin ‘background’ spread of struck flint was recovered from most of the area between the lithic clusters.

Recognition of ‘background’ scatters on the floodplain poses interesting questions of interpretation, which this project has not yet fully addressed. Clusters of debitage have been replicated by modern knappers, and dumped material also has recognisable characteristics, but the mechanisms by which background material has been created are complex and as yet unclear.
Figure 4: Plan of the site showing excavated areas, the silted hollow containing the Neolithic middens, flint clusters, burnt areas and other features.
Categorisation of this sort has proved helpful in attempting to interpret individual lithic assemblages. Before we can attempt to interpret the interrelationship of these assemblages, however, problems of chronology have to be addressed.

Since the majority of the lithic scatters on the floodplain have not been accompanied by other cultural material, or even by charcoal, dating has had to rely upon the artefacts themselves. This is in part due to the nature of the floodplain soils and their formation; although eventually buried by alluvium, these surface deposits may in some cases have been exposed on the ground for some time to trampling and weathering processes. Probably more significantly, the floodplain is subject to periodic wetting and drying and leaching of the soils, resulting in the destruction of fragile materials like pottery and bone. Nevertheless, pottery has survived in places on the floodplain, and lithic activity may simply have been spatially separate from other cultural activities.

Whatever the reasons, in many cases this has made the dating of lithic activity difficult. As indicated above, diagnostic tools have often been absent, and technological traits have had to be used. While these provide a general guide to date, factors such as the size and quality of raw material, the different end products for which knapping is undertaken, and even the varying skill of the knapper, can affect the character of the debris left behind, and so hinder accurate dating.

The effects of post-depositional processes in moving lithic material also have to be considered. Some lithic material has been redeposited within the alluvium, presumably by flood action. In several trenches small groups of struck flint of Mesolithic date were found close to the top of the alluvial sequence. In some cases they were mixed with clearly later lithic material, but in others they were not. Even during the evaluation it was possible to recognise these as redeposited because of their diagnostic technology or artefact type, but this is much more of a problem for Neolithic and later material.

Figure 5: Photograph showing the successive buried soil horizons (visible as dark bands) within the alluvial build-up. The uppermost buried soil dates to the Early Bronze Age.
Another problem that has occurred on several occasions within the larger lithic clusters of Early Neolithic date has been the identification of a small proportion of diagnostic artefacts or technological traits of later date than the vast majority of the material. It is possible that this is simply due to a recent utilisation of an area where lithic material has been exposed for a long period of time, though the analyses carried out to date would not support this idea (see Methodology below). Another possibility is that later lithic material deposited higher up in the soil profile is transported down by worm action until it comes to rest upon an earlier lithic cluster, whose density prevents a similar dispersal or vertical movement of material within the cluster.

The effect of changes in the compaction of successive alluvial deposits, and changes effected by post-depositional leaching and chemical deposition, upon the vertical movement of flints within the soil profile, also need to be borne in mind. Soil micromorphology has not yet been carried out on the horizons on which the flint clusters occur, but this may prove crucial in establishing the integrity of buried soil horizons and the lithic activity upon them.

PROBLEMS AND POTENTIAL ON THE GRAVEL TERRACES
In these parts of the site deposits overlying the gravel (for instance prehistoric ground surfaces) have generally been obliterated by ploughing, and struck flint is usually found either redeposited within the ploughsoils or within discrete features. Finds from contemporary features are isolated from their surrounding context, and while well-preserved may not be representative of contemporary activity, as recent studies of pit assemblages, eg on Cranborne Chase (Brown 1991), have shown. Struck flints redeposited in later features can provide a better picture of general activity, but other cultural material such as pottery is often not preserved, or in the case of animal bone cannot be distinguished from bones of later periods. A selection of the ancient treeholes on the site was investigated, and some of these contained substantial assemblages of struck flint, but it is always difficult to establish whether the finds from these features are contemporary or redeposited, and thus to reconstruct the context of the lithic activity.

The omission from the Mitigation Strategy of a detailed fieldwalking exercise covering the gravel terrace areas is much to be regretted. A programme of detailed fieldwalking would undoubtedly have been informative; fieldwork carried out so far has broadly corroborated the conclusions reached by the initial rapid fieldwalking survey (Carstairs 1986), demonstrating the value of surface collection for identifying prehistoric sites.

As on the floodplain, however, the best-preserved sites would not have been identified by surface collection. A sample area of 2150 sq. m at the south-east end of the site (Area 6), which included the northern pair of barrows and part of the Late Pleistocene silted channel, was walked by students from Reading University in 1995 after being ploughed specifically for this purpose. The work was undertaken both to look for Mesolithic artefacts and to assess the intensity of Bronze Age activity around the barrows. Due to low rainfall the soil was not well broken down, and conditions for fieldwalking were not ideal, but only a very low density of struck flint was recovered (260 pieces), and virtually none of this came from over the silted channel in which the Neolithic midden was later found. This confirms the evidence from excavation that suggests that ploughing had only slightly disturbed the top of the midden deposit in the hollow, and had not brought any significant quantity of material to the surface.

Test-pit sieving was also carried out through the ploughsoils overlying the gravel terrace north of the hollow to examine whether the activity found within the hollow had originally extended further, but had been ploughed out. A 4% sample of two areas totalling 2600 sq. m was sieved, but on a flint gravel subsoil the problems of sorting struck flint from natural and plough-struck flint has made this a very time-consuming and costly strategy. Nevertheless, more than half of this material has been sorted and identified, and this suggests that struck flint is present across the area at an average density of 6 pieces per sq. m. No pottery survived, and the lithic material is of mixed date, mostly small and undiagnostic, but the results probably indicate that Neolithic activity extended well beyond the hollow. The average density of struck flint within the hollow is however at least three times as much.

METHODOLOGY
Since the start of the detailed evaluation in 1994, when the possibility of in situ struck flint within the alluvial build-up was first realised, almost all struck flints have been bagged, numbered and located individually, in order to be compatible should the surrounding area subsequently be excavated in detail. Groups of flints identified visually as a cluster are also given an identifying group number to aid post-excavation analysis. Initially the flints were located 2-dimensionally on levelled plans, but since 1996 3-dimensional recording using a Total Station has been adopted, and the co-ordinates on plan have now been transferred onto computer so that analysis of distributions and artefact types can be carried out mechanically.
Figure 6: Plan of Area EX1 across the floodplain, showing the distribution of lithic clusters in relation to the former channel of the Thames.
Three-dimensional co-ordinates not only help to unpick the development of an individual knapping episode, or distinguish between successive knapping episodes in an activity area, but also allow the ground surface to be investigated, and the degree of vertical displacement of flints since deposition to be measured. Within large spreads of flint the visually identified clusters can be checked against the computer plots, often refining the groupings during refitting. During the 1997 excavation geo-referenced digital photographs of the flint clusters were taken, which allows the photograph to be overlain directly by the point data, so that the spatial relationships between individual pieces or groups can be checked visually.

The Neolithic midden deposits covered a large area; that in Area 6, whose full extent is known, was spread over nearly 4000 sq. m. These areas were divided into 2m squares, a sample of which was then excavated. Alternate 2 m squares within three areas totalling 750 sq. m. were excavated in Area 10, and further squares dug to create larger open areas where particularly significant deposits were found. In Area 6 the first season of excavation was limited to exposing the deposit, assessing its character with several trenches at different points across the hollow, and excavating alternate 2 m squares within a 6 m wide trench across the densest area. In the second season the hollow was divided into 4m squares, and a stratified random 10% sample of 4 squares in every geographical block of 40 was excavated. Areas 4m square were chosen as being large enough to comprehend the nature of the activities taking place at any one location. This was supplemented by further 4 m squares chosen by judgement sampling, which targeted both the densest clusters of artefacts and any large gaps left by the stratified random sampling. In total nearly 20% of the deposit was excavated (Fig. 7); the overall sample was dictated by cost, and would ideally have been larger.

Where small discrete scatters have been identified a variety of approaches has been used, from planning, co-ordinating and photographing in situ to lifting whole scatters as a block for excavation under laboratory conditions later. The last technique was used during evaluation before the advent of digital recording when time on site was short, but 3-dimensional recording and digital photography on site, which avoids the problems of transporting and keeping together large blocks of soil, is much to be preferred. Where extensive spreads of struck flint were found during evaluation, as in the case of the Early Mesolithic site, the trenches were divided into 1 m lengths, and a selection of these was excavated by hand to assess the density and character of the material.

In some cases individual recording of struck flint has not been carried out. Within a thin layer on the north bank of the former Thames channel in Area 3 a scatter of struck flint of mixed date was found without any clear concentrations. The flint appeared to lie at all angles, and the deposit had clearly been ploughed. In this case the aim was to recover information upon the density of activity and its extent, and once the disturbance of the flints had been established by trial excavation the area was divided into 2m squares, and every alternate square was excavated, the struck flint being bagged by 2 m square.

The presence of an in situ knapping scatter is usually evident during excavation from the density of the struck flint, the freshness of the material and in particular from the absence of soil separating the successive layers of flake. Sieving for microdebitage (small chips), usually from 30 litre samples, has been of assistance in distinguishing between in situ knapping and debitage dumped from elsewhere; several Bronze Age flint groups containing numerous flakes from the same core did not contain any small material, and appear to belong to the latter category. In the case of the Early Mesolithic site, sieving demonstrated that the smallest microdebitage (<2 mm) was absent, though small pieces (10-2 mm) were common. The soils themselves contained aquatic molluscs, suggesting that the material had been knapped in situ at the edge of the lake, and had subsequently been slightly disturbed by overbank flooding, which removed the smallest fragments but did not significantly redistribute the larger pieces. In one trench a series of flint-bearing deposits was visible separated by thin layers of alluvium, showing that the site had been visited repeatedly.

Assessing the post-depositional disturbance to the midden deposits has been greatly aided by the study of cortication and by usewear analysis carried out with the aid of a low-power microscope. For the midden deposits in Areas 6 and 10 the vast majority of the flint is very fresh, suggesting that it was buried rapidly, and has been little disturbed since. A limited assessment of the usewear has shown that there has been little post-depositional damage, and has in addition demonstrated a high degree of utilisation of flint flakes (more than 50%) for a variety of functions. This information has led to a reassessment of the significance of the retouched element within the lithic assemblage. It is hoped to examine a much larger sample of flint flakes in order to examine the spatial variation of activities within the midden deposit, and to extend this technique to the flint clusters on the floodplain.

Attempting to refit the struck flints has also proved useful, helping to identify the number and size of nodules being worked and the purpose of the knapping. Examination of the vertical displacement of refitting flakes can help in assessing the degree of post-depositional movement of lithic material in the soil. The horizontal grouping and spread of debitage from each core can also be informative, while the absence
Figure 7: Plan of Area 6 showing the extent of the Neolithic midden deposit, the sampling strategy and the distribution of finds recovered.
of parts of broken flakes can help to distinguish dumped from in-situ material even where microdebitage is present. Several apparently discrete concentrations of struck flint were recorded during excavation within the largest Early Neolithic activity area on the floodplain, but matching flint raw material and refitting joining pieces has shown that all of these belong to one phase of activity (Fig. 8). The assemblage is the result of a variety of activities including knapping, hide scraping, arrowhead manufacture and cutting. There are different emphases within the area of lithic material, but some degree of horizontal movement of the material has clearly occurred, and there are insufficient refits to indicate that in situ knapping was the major activity taking place.

Combining sieving for microdebitage with refitting has already indicated the pitfalls of simplistic interpretations of these categories of evidence. In Area 6 the presence of significant quantities of microdebitage in one area was taken to indicate in situ knapping, but attempts to match raw material and refit flakes of similar type within this particular assemblage have proven negative. Microdebitage needs detailed examination to establish whether the small flint chips result from knapping, from retouching tools or simply from damage to the flints either when dropped or by later trampling. While examination under a low power microscope has shown that the flints from the Area 6 midden are in fresh condition, there are still nicks on most flakes resulting from damage, and given the size of the assemblage this alone can generate considerable microdebitage.

Key to refits
- Arrowhead
- Polished axe
- flakes

Scale 1:40

Figure 8: Plan of the activity area in EX1 showing the distribution of refitting arrowheads and other tools.
Using the material recovered in evaluation an attempt was made to establish a pattern for occupation of different periods, and to predict the depth at which occupation horizons would be found. However, while the finds showed that activity of every period from the later Mesolithic to the Late Bronze Age was represented on the floodplain, their distribution suggested that the scale of individual activities in most periods was localised, and conversely, that activity in all periods appeared to be widely scattered. The depth of sediment separating activities was very varied across the floodplain, and no clear progression could be established. In retrospect this was complicated both by the problem of redeposition and by the existence of a substantial levee alongside the Thames palaeochannel, which was not properly recognised during evaluation.

The agenda for excavation of the floodplain has been to examine as large an area as funds would allow, and three parallel areas running from the gravel terrace across the floodplain and into the former Thames channel have now been examined (Fig. 4, Areas EX1-3). These areas allow examination of the patterning over time both along a 200 m stretch of river, and from terrace to channel edge. The excavations make use of control trenches dug along both long sides of the excavation areas to examine the stratigraphy in advance of area stripping, and of area stripping to several levels within the alluvial build-up to allow sample excavation of a similar percentage of each horizon. A second smaller area of floodplain has been excavated in the same way for comparison (Fig. 1, Areas 3 and 5).

Excavation of the three parallel floodplain areas has revealed a very different density of activity between them, and has indicated that despite the length of time involved, there are blank areas and areas of distinct concentration within this zone. A concentration of Neolithic flint clusters was revealed in Area EX1, and although the western limit of this concentration was not established, the distribution of the clusters appears to be linear, perhaps reflecting the existence of a track down to the river, with a clearing made by fire to one side which was later utilised as an activity area (see Fig. 6). Given the environmental evidence that much of the floodplain was wooded, this is not perhaps surprising. Both the floodplain areas that were excavated show a concentration of activity close to the contemporary river bank, and the location of the Neolithic channel appears to be a good guide to the presence of lithic clusters nearby (Fig. 1). This may indicate considerable movement by river in this period.

This pattern is not however repeated in the Early Bronze Age, when activity is more scattered and tends to occur nearer to the gravel terraces. There is however much less evidence overall for activity other than burials in this period. In the Middle and Late Bronze Age deposits of burnt flint cluster along the river’s edge, but no clear pattern is yet evident in the distribution of struck flint.

CONCLUSIONS

The quantity of struck flint recovered from work across the Eton Rowing Lake site appears to indicate that the landscape has been intensively used throughout the Mesolithic-Bronze Age periods. Detailed fieldwalking on the gravel terrace areas would undoubtedly have located further activity areas, and expanded our understanding of those that have been excavated. While however no systematic comparison of surface collection and sub-surface excavation has been carried out, present evidence suggests however that the best-preserved sites are not identified by surface collection, and that fieldwalking needs to be supplemented by trenching to take account of factors of preservation.

Observation also suggests that where there is widespread Neolithic and Bronze Age activity across the landscape, there will be an almost ubiquitous low-level background of struck flint, as well as areas of much greater concentration. This clearly poses problems for those who seek to use surface collection strategies or evaluation trenching samples to identify significant sites using relatively low densities of struck flint. Only by undertaking large-scale collection both from the surface and from excavation can an appropriate baseline of flint use for each landscape be established.

Locating well-preserved lithic scatters on the floodplain is difficult, most obviously because these deposits are buried below plough levels, and are not visible on the ground surface. Understanding the fluvial and alluvial background is a prerequisite for attempting to locate and understanding lithic scatters on the floodplain, and a greater number of test-trenches (of the order of at least a 3% sample) would have been required to establish a credible Mitigation Strategy had not the first season of area excavation been carried out while evaluation was still in progress. While in some periods topographic features (in this case a former channel of the river Thames) appear to have acted as a focus for lithic activity, in others this does not appear to have been the case. Moreover, there were no extensive and clearly recognisable occupation horizons at which finds of a particular period occurred. Instead, localised horizons were evident where fires had been lit or occupation had occurred, but beyond the immediate activity area there was nothing evident macroscopically.

There are also chronological variations in the ease with which lithic activity may be found. While some lithic scatters of the Early Mesolithic and Early Neolithic covered large areas at high density, and so were relatively easy to locate by trenching, those of late Mesolithic, late Neolithic and Bronze Age date were of restricted extent. At
the Eton Rowing Lake the difference in scale in these different periods is probably a genuine indicator of the scale of exploitation of the site over time, but may alternatively be the result of more fundamental changes in the scale, character and relations of production in different periods. Evaluation strategies need to take account of such different modes of production.

Lithic activity in the Early Neolithic in Area EX1 incorporated assemblages of various sizes, and while the largest assemblages are undoubtedly informative, it is the overall pattern of exploitation of the floodplain and the relations between assemblages of different scale and kind that offers the most insights. The Eton Rowing Lake experience has demonstrated the importance of a landscape approach to lithic studies.

One of the particular challenges, or as we prefer to see it, the particular opportunities presented by this landscape project, has been to examine lithic production and use in conditions of exceptional preservation over a very large area, and within the pragmatic constraints of developer-funding. This has meant devising methodologies for sampling the enormous potential represented by the alluvial deposits while still attempting to recover information of high quality. The use of 3-dimensional plotting and computerisation of the recording of individual artefacts has been essential in this process. Moreover, the successful interpretation of lithic scatters requires the integration of traditional lithic analyses with an understanding of alluvial and other geographic processes.

As a final comment, it must be emphasised that fieldwork at the Eton Rowing Lake has not yet been completed, and that only limited post-exavation analysis has been undertaken on the material recovered so far. Any statements made are therefore provisional, and may well be modified or even overturned by further work.

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The struck flint from this site has been studied in the main by three individuals, from whom much of the information in this paper is derived. The 1994 evaluation material, including the Early Mesolithic assemblage, was studied by Nick Barton. Since then the flint has been recorded by Tess Durden and more recently by Hugo Lamdin-Whymark, who is also carrying out the refitting and technological studies. I am grateful to all of these for discussing the problems with me. The drawings were produced on computer by Mel Costello and Ken Welsh.

T G Allen, August 1998

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