SOME THOUGHTS ON A STRAY UPPER THAMES HANDAXE

T. Hardaker

INTRODUCTION

This paper describes the find of a flint handaxe in an unexpected context, prompting the development of a new model to explain the occurrence of Lower Palaeolithic artefacts in Devensian gravels. The presence of a flat area (or méplat) on the side of the handaxe is discussed and a wider study of this feature is suggested. The significance of this find, and others, coming from areas distant from lithic raw material sources, is discussed in terms of Lower Palaeolithic occupation strategies in central Britain.

AN UNEXPECTED FIND

In 2001 a new gravel pit at Linch Hill near Stanton Harcourt, close to the river Thames upstream of Oxford, was opened. The site should not be confused with Lynch Hill of the Middle Thames. The excavation is in Devensian gravels of about three metres in depth, belonging to the Floodplain Terrace. The pit is 2km east of the Windrush, close to its confluence with the Thames (Figure 1), and just outside the ‘tongue’ of the Northern Drift quartzite pebble zone, which broadly follows the course of the Evenlode Valley further east (Hardaker 2001: 182).

The deposits at Linch Hill contain very few large stones (>10cm), whether limestones, quartzites or erratics. The section reveals only coarse, medium or fine limestone gravels often in a matrix of sands, with occasional separate lenses of sands and a few silty or muddy beds. From previous experience in Upper Thames gravel pits, the lack of larger clasts and especially quartzite pebbles here suggested there would be no Palaeolithic artefacts. But unexpectedly, in October 2002, a fine flint handaxe 190mm in length (Figure 2) was discovered on the pit floor by the digger driver, Paul Gunning, at Grid Reference SP 4334 0476. It is a typical Acheulian product, with only slight to moderate rolling (ridges feel slightly sharp to the touch), slim and pointed, with a small contemporary break at the tip. A grey stain implies that it had lain on the Oxford Clay bedrock and not in the body of the gravels. On the dorsal side about 40% of the cortex remains. Long thin invasive flake scars on the ventral side suggest that it was produced by a confident, experienced knapper using a soft hammer. The edges are quite rounded and damaged, much more than the surfaces. Insofar as use damage and post-depositional wear can be separated, this pattern would be consistent with the axe being used as a knife when held one way round but as a chopping tool when held the other way.

An unexpected solitary find of this kind is interesting because it may offer some clues to Palaeolithic activity in the Upper Thames valley. In many years of searching only three small handaxes had come from the former (much larger) gravel pits at Linch Hill (MacRae 1990: 5).

7 79 Millwood End, Long Hanborough, Witney, Oxford OX29 8BP. Email: terry.hardaker@oxfordcarto.com
Larger stones had seldom been seen on the pit floor in two years of gravel extraction, although they had very occasionally come across stones ‘three or more feet across’ (Peter Steffens pers. comm.). An examination of the newly-excavated pit floor confirmed this. Only one stone larger than the handaxe, an angular ‘sarsen’ lump 240mm long, was found. There was also a notable absence of smaller quartzite material, comprising well below 1% of the gravels. In contrast, other local Upper Thames pits in the Devensian gravels at Cassington, Hardwick and Gill Mill, are littered with large quartzite cobbles on the pit floor, and these form a substantial proportion of the stones in the reject heaps. These quartzites can only have been derived from the Northern Drift, which was originally laid down from OIS Stage 13 or earlier. They were subsequently reworked, downstream and laterally, by fluvi- al action at different stages. The scarcity of quartzite at Linch Hill shows that this part of the floodplain was narrowly missed by the main thrust of the quartzite dispersals.

**WAS THE HANDAXE IN SITU?**

To consider this question, it is necessary to take a wider look at the evidence from Devensian gravel pits in the Upper Thames Valley. The origin of the large quartzite and other clasts so frequently seen on Devensian pit floors was briefly discussed in an earlier paper (Hardaker...
It had hitherto been assumed that they are a part of the initial Devensian aggradation. If so, the fluvial activity at that time must have been powerful enough to transport them. Subsequently clast size became less, suggesting lower fluvial energy for the remainder of the Devensian aggradational phase. Why would this be so? A possible explanation is given in Bridgland’s model of river terrace formation (Bridgland 2000: 1295) where during Stage 1, at the transition from glacial to interglacial conditions, the initial discharge is high owing to melting permafrost. An alternative explanation could be that the large clasts (defined here as having one dimension over 10cm) are simply inherited from previous land surfaces and were too large for any later flow to move them further. This may be the situation not only for the very few large clasts at Linch Hill, but wherever these clasts are seen in greater profusion: certainly isolated stones a metre across suggest deposition in an earlier period.

Figure 2: The Linch Hill handaxe

There are thus two possible explanations for concentrations of large clasts on pit floors: the initial Devensian discharge is responsible for laying down all the clasts seen on the pit floor, including even the largest; or the larger clasts represent a ‘lag’ deposit belonging to a previous land surface.

The occurrence of Lower Palaeolithic material in gravels of Devensian age is an anomaly, because there is a lack of clear evidence for a human presence in Britain between OIS Stage 6, about 200,000 BP, and the Middle Devensian at about 65–60,000 BP (Barton 1997: 81). It
has been explained by assuming that the artefacts are ‘derived’ from earlier gravel terraces. Until recently we could not be sure that the artefacts in Devensian gravels only occurred on the pit floors and not higher up in the sections, because so often these artefacts are not found until they reach the reject pile. It is now safe to confirm this assertion. From over 1000 artefacts recovered from the Upper Thames Devensian gravels in over 30 years of searching by MacRae (pers. comm.) and in over 15 years by the present author, not a single one was seen in the main body of the gravels, whereas many were picked up on the pit floor, some embedded in the clay bedrock. This lends weight to the argument that the artefacts, together with their associated large clasts, belong to a separate lag stratum of pre-Devensian date. The Devensian gravels would therefore be archaeologically sterile.

If correct, this has a profound implication for the Lower Palaeolithic. Artefacts (the Linch Hill handaxe included) would not have been transported by the Devensian rivers. They would have already been dropped on the land surface at an unknown date before the onset of OIS Stage 6. Could they be closer to in situ than we had thought? The clustering of artefacts has been noted in almost every gravel pit the author has studied. In the Upper Thames valley, it is observed at Cassington, Gill Mill, Gravelly Guy, Hardwick, Sutton Courtenay and Latton. In the Middle Thames it was seen at Cannoncourt Farm, Furze Platt (Berkshire) (John Wymer pers. comm.) and further afield at Ridge pit (Hampshire), Feltwell (Norfolk), and Warren Hill (Suffolk). Typically, with regular visits, one or two artefacts per week will be found over a period of several months, and then they will cease to appear (see, for example, Hardaker 2001: 193).

Regular visits to the Cassington pit have shown that it is not only the artefacts that are clustered, but also the other large stones on the pit floor. But the two do not coincide spatially. The typical pattern is shown in schematic form in Figure 3 which is based on actual transects taken on the Cassington pit floor. Artefacts do not occur in all the concentrations of quartzite pebbles. It is as if something — possibly access — was causing selection of which clusters to source for blanks. The author had long suspected that the artefact clusters had something to do with actual human activity areas, but that they had been moved downstream by the Devensian outwash, and were therefore not in situ. The spatial arrangement of these clusters may now take on a more interesting context — perhaps something closer to ‘sites’, rather than just collections of stones thrown into place by fluvial action.

The point is amplified by an earlier observation from Cassington pit: flint artefacts came from the east end of the pit and quartzites almost exclusively further west (Hardaker 2001: 190), suggesting that these were spatially discreet collections made by different communities. Neither the artefact clusters nor the pebble clusters seem to bear much relationship to the gently undulating topography of the Oxford Clay land surface: for example, they do not necessarily lie in hollows. However, the artefacts nearly always occur in areas where there are other quartzite pebbles of artefact size, suggesting that they have been manufactured from local quartzite resources. The evidence is suggestive of communities ranging over a landscape, possibly a braided river, where fluvial activity had already grouped large stones into clusters. Selected clusters were sourced for tool manufacture, and some of the tools were used and discarded at the point of sourcing. The evidence from Cassington indicates that worked-out cores were frequently dropped in the cluster zone, but that flakes were generally taken away.
The variable amount of wear on the artefacts found in the Devensian pits shows that their history is complex; some items are fresh and may not have moved far, others are very rolled. Wear, other than use wear, may be attributable to several factors. Rolling under the influence of stream flow is the most obvious, but weathering, frost action and percussion while on a land surface also have an effect, although little is known about the rate at which quartzite wears in these situations.

To summarise, the model now being proposed envisages lag deposits of quartzite and other large clasts accumulating in valley floors from the time that the Northern Drift was laid down. Remnants of these are seen today as clusters lying on the Oxford Clay land surface underneath the Devensian gravels. During any time from OIS Stage 13 until Stage 6, the quartzites provided a local lithic resource for Palaeolithic occupants of the Upper Thames region, in an area virtually devoid of knappable flint. Some of these clusters and their artefacts may remain close to their original discard locations, offering potentially much larger...
Palaeolithic spatial distributions than can be discerned from excavated sites. The Linch Hill handaxe could be a stray, well-used object, carried by its owner to a place some distance from its raw material source. In this model, the findspot would be virtually where the owner dropped it.

If this new interpretation of the archaeology of floodplain gravels is valid, the need for close monitoring of spatial patterns in gravel extraction sites becomes considerably more important.

**THE MÉPLAT PHENOMENON**

There is a special feature on the Linch Hill handaxe which links it to others found close by. A flat unknapped area (or ‘méplat’, Figure 4) on the lower right edge (B), together with a convenient but probably unintentional ‘thumb rest’ on the ventral face, allow the axe to fit comfortably in the right hand but not in the left. The méplat is adjacent to a ‘problem area’ (A) where the maker repeatedly and unsuccessfully tried to achieve removals; evident from an intense group of step fractures. The méplat could have been knapped but has been left untouched. It suggests that such flat areas on the sides of handaxes, whether cortical or of flake-scar origin, were deliberately left there, perhaps to provide a comfort-area for the palm of the hand.

*Figure 4: The problem area (A) and the méplat (B) beside it*
Just 2.5 km northwest from where the present artefact was found, MacRae found 49 flint and 19 quartzite handaxes at the Gravelly Guy pit in the 1980s (MacRae 1990). Several of these handaxes also had the méplat feature. Other examples like this from the Acheulian are known (Cranshaw 1983: 82–3), although the méplat does not appear to have been the subject of any general study. In the author’s opinion, the similarity in style between the Gravelly Guy handaxes and the Linch Hill find (Figure 5), together with the méplat feature, suggest that the Linch Hill example is a stray from the Gravelly Guy group.

Figure 5: The Linch Hill handaxe (chocolate brown) together with five from Gravelly Guy

The méplat phenomenon is itself rather remarkable. The French word méplat merely means a plane or flat area. Although many authors seem aware of the feature, few have applied the
term to handaxe morphology. François Bordes, in his classic work *Typologie de Paléolithique Ancien et Moyen* actually uses the term *méplat* (1961: 59–63) and illustrates a few examples, allowing for both a *méplat de base* and a *méplat latéral*. In the latter case, this means that a substantial part of one long edge of a handaxe is deliberately left unworked, as cortex or a naturally flat area, the opposite edge being fully worked. In some classification schemes for the Acheulian in sub-Saharan Africa, such a tool would be regarded as a ‘knife’ or ‘backed knife’.

If *méplats* were produced deliberately, as seems likely, they represent a specialised planning concept in handaxe preparation which would have to be passed down through groups of people in time and space. With the increasing refinement of Pleistocene terrace dating in Britain and Continental Europe, a study of *méplat* distributions might reveal a spatial lattice that can tell us something of the extent of communication networks and their timespan in the Palaeolithic.

**OCCUPATION BEYOND THE CRETACEOUS ESCARPMENT**

The presence of flint handaxes in areas beyond the Cretaceous escarpment has been examined by MacRae (MacRae & Moloney 1988: 123–124; MacRae 1994). The Linch Hill handaxe is far too large to have been made from the small flint nodules to be found in the Thames terrace gravels (which are usually frost-cracked and unknappable). It must have been sourced from flint from afar. The findspot lies some 18km from the nearest geological source of flint in the Chilterns. Finds in the Upper Thames since MacRae’s 1988 survey on non-flint tools have confirmed the dual nature of raw material sourcing practised in this region (Hardaker 2001: 181).

In discussing nine flint and quartzite artefacts discovered in the Stanton Harcourt Channel excavations, Roe (1996: 413–414) came to similar conclusions. He observed that the flint handaxes from Berinsfield, close to the Chilterns, were often of good size, whereas those from Iffley, more distant from the chalk hills, were smaller and of poor quality flint. Yet those from Gravelly Guy, although of variable workmanship, were large and made from good quality flint. The inhabitants made different choices at different times — whether to search for quartzite cobbles in the local river beds, or whether to make the journey to the Chiltern hills to obtain better materials.

The recent study of the MacRae collection by Hyeong Woo Lee also touches upon the question of raw material sources (Lee 2001: 54–56). Lee relates resource availability to subsistence equipment and demographic pattern. He concludes that in all three factors the Lower Palaeolithic occupants of the Upper Thames operated on a low level, with the result that lack of lithic resources would tend to impede widespread occupation.

The findspot of the Linch Hill handaxe is near to the margins of the more intense Palaeolithic occupation in Britain, at least in the present state of our knowledge. Looking at the wider picture of Lower Palaeolithic occupation in Middle Britain, Wymer (1988: 12) has drawn a map of the distribution of findspots of artefacts north and west of the Severn-Wash line, showing 117 sites, with a strong concentration in the Vale of Evesham and a noticeable fall-off within the Devensian icecap regions (Figure 6). The density of finds is much less than in most areas to the southeast, as mapped by Roe (1981: 132–133). Wymer concluded that there is no argument to support the lack of Palaeolithic activity in the north of Britain on the grounds of inadequate raw material (Wymer 1988: 11). Since then, further sites have been
added in the Midlands, notably by Mr. Ron Waite of Nuneaton, and also as reported by Graf (2002) and Bee (2001) in Lincolnshire.

![Figure 6: Lower Palaeolithic artefact finds north and west of the Severn–Wash line, after Wymer (1988)](image)

Nevertheless there is a dearth of Palaeolithic material north-westwards of the Chilterns–East Anglian Heights line, in comparison to the region south of this line. The argument that glaciers and their outwash have swept all evidence of human occupation out to sea in more northerly regions was questioned by Roe (1988: 4): large parts have probably remained unglaciated since the Anglian. Is it just coincidence that this line, the scarp of the Cretaceous, also represents the limit of flint resources in the country? The only other flint-rich area is the coastal strip through Lincolnshire to the Yorkshire Wolds, an area of scarce Palaeolithic finds. What happened in regions beyond the range of these resources? The quartzites of the Northern Drift and the Bunter pebbles of the Midlands occupy only a fraction of the landscape and could not possibly have serviced the requirements of a country-wide occupation, if indeed there was one. Yet there must have been many periods in the Middle Pleistocene when Central and Northern Britain offered suitable environments for Palaeolithic occupation, in warming or cooling epochs, if not in full temperate conditions. Wymer’s assertion did not take into account considerations of the practicalities of hominid survival in regions lacking proximity to raw material for stone tool manufacture.
The distance that hominids were able to travel to access these materials is a crucial question. Leakey (1971: 17–18 and 263–4) observed that at a very early stage in the Lower Palaeolithic, the makers of pebble tools in Bed 1, 1.85–1.70 Mya, were transporting materials up to 14 km. The greatest distance that can reasonably be assumed so far in the Upper Thames is 20km, from the Chilterns to Stanton Harcourt (Scott 1998: 112). Wymer’s map (1988: 12) does show flint tools much further from the chalk outcrop in the Midlands, suggesting that in certain cases, very long distances were travelled. If such distances were achieved through seasonal movements, sourcing flint may have been encompassed in these travels. At the same time the fall-off of artefact finds away from the raw material source zones implies that lack of proximity to these resources did present a problem. Alternatively a dearth of raw materials may simply have prevented, or limited, Palaeolithic occupation. The evidence from the Midlands once again implies that not all communities addressed the problem in the same way during some 300,000 years of intermittent occupation. It would be interesting to test whether typology varies with distance from raw material source for Wymer’s 117 findspots.

The extreme scarcity of Lower Palaeolithic sites within the area covered by the Devensian icecap, as seen on Wymer’s map (op. cit.) shows the devastating effect that the ice had on the river terraces where most artefacts would have been deposited. Beyond this line, there is little hope of reconstructing more than isolated fragments of Lower Palaeolithic occupations.

The generalised axiom that lack of lithic raw materials did not create a problem for Lower Palaeolithic peoples has not been supported by sufficient detailed case studies comparing the distribution of geological resources with the lithic scatters. The climatic argument for defining central Britain as ‘marginal’ may be less valid than the raw material argument. A more thorough examination of the part played by lithic constraints in the Lower Palaeolithic is needed, whether in Britain or in a wider context.

The discovery of the Linch Hill handaxe has raised a number of different issues, some barely touched upon in previous literature. This is perhaps a testament to the evolving state of our understanding of the Lower Palaeolithic, which still offers the exciting prospect of new interpretations.

ACKNOWLEDGEMENTS

I would like to thank Derek Roe for kindly reading the draft of this paper and offering a number of improvements and amplifications, especially concerning méplats, and David Bridgland for guidance on the question of ‘lag’ deposits. Thanks also to Vicky Winton for initially drawing my attention to méplats.

A note on the handaxe drawing

The drawing was made in pencil allowing a ‘continuous surface’ representation, so that no part of the morphology of the handaxe is left undescribed. This is seldom possible using the traditional pen and ink method. The drawing was scanned at 1440 dpi and the contrast enhanced using Adobe Photoshop.

BIBLIOGRAPHY


