Cannoncourt Farm Pit

[SU 878 831]

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Highlights

A reference site for the Pleistocene Lynch Hill Gravel of the Middle Thames basin, Cannoncourt Farm Pit is also the source of one of the richest and most important assemblages of British Palaeolithic artefacts.

Introduction

Cannoncourt Farm Pit, at Furze Platt, Maidenhead, is one of the most celebrated Palaeolithic sites in Britain. It is a gravel pit, worked by hand during the early part of the century, in which large numbers of artefacts were found, many of elegant form and in excellent condition (Lacaille, 1940; Wymer, 1968). The deposits belong to the Lynch Hill Gravel of the Thames, not one of the earliest terrace formations to be recognized, but now acknowledged as one of the most important, particularly in view of its Palaeolithic content (Wymer, 1968, 1988). The Lynch Hill Terrace was originally defined by Hare (1947), although previously it had been observed locally, principally at Furze Platt, and given a number of different names, as follows: the Furze Platt Stage (Warren, 1926, 1933), based on observations by Treacher (1909); the Furze Platt Terrace (Wright, 1937); Taplow Terrace No. 1 (Burchell, 1934a), the upper of two Taplow Terraces recognized by Burchell (not to be confused with the two divisions of the Taplow Terrace recognized by Sealy and Sealy (1956); see above, Introduction to Part 3); the Iver Stage (King and Oakley, 1936) and the Lower Boyn Hill Terrace (Lacaille, 1940).

Reviews of the Furze Platt site and its Palaeolithic industry were provided by Wymer (1968, 1977c), Roe (1981) and Cranshaw (1983). A recent housing development in the area immediately to the north of the GCR site has provided new sections in the deposits underlying the Lynch Hill Terrace, prompting a reappraisal of the Pleistocene geology at Furze Platt (Harding *et al.,* 1991).

Description

Cannoncourt Farm Pit is part of a complex of old workings that once exploited the Lynch Hill Gravel. It lies in a part of the Thames valley where the river has flowed from north to south since the aggradation of the Black Park Gravel (Hare, 1947; (Figure 3.1)). The earliest mention of a site at Furze Platt appears to be that by Treacher (1896), who reported that Palaeolithic implements and waste flakes were found close together at the bottom of the gravel, in a layer comprising large unrolled flints in a sandy matrix. This layer, which was overlain by 4 m of well-stratified gravel, was, according to Treacher, the nearest approximation to a Palaeolithic 'workshop' to have been seen in the area. Treacher (1904) later described only 2.5 m of gravel at the site, the lowest 0.5 m yielding artefacts, 500–600 of which (excluding waste flakes) had been found by that time. The implements described were hand-axes showing a minimum of secondary chipping, mainly of small size, although including a few large and massive specimens. In early descriptions of the Furze Platt artefacts, the economy of labour in their manufacture was noted, a minimum number of blows having been utilized to produce the finished implements (Treacher, 1896, 1904; Shrubsole, 1906). The various early records suggest that the present GCR site was not in existence before 1909 and that Treacher's earlier descriptions appertain to the former 'Cooper's Pit' immediately to the north ((Figure 3.14); Wymer, 1968; Cranshaw, 1983).

The first detailed description of the Furze Platt sections was by Lacaille (1940), who recorded *c.* 3 m of poorly stratified (but clean) sandy gravel overlying Chalk at 42 m O.D. The upper part of the gravel was channelled and overlain by solifluction deposits and sandy brickearth. In addition to palaeoliths, Lacaille found poorly preserved bone fragments at this site, amongst which only an antler of giant deer and a horse tooth were identifiable. He recorded Abbevillian (Early

Acheulian), Acheulian and Clactonian artefacts from the site, illustrating many of these as well as a section through the deposits. Further examples of palaeoliths were illustrated by Lacaille (1960) and Wymer (1968). Wymer did not support Lacaille's (1940) claim that the site had also yielded artefacts made using the Levallois technique (see Chapter 1).

Wymer (1968) described the history of Cannoncourt Farm Pit in great detail and included photographs taken while the pit was operational; he had himself conducted excavations there in 1953–4, when he removed some of the last remaining patches of undisturbed gravel from the floor of the pit, finding a number of artefacts in the process. The face at this time showed 1.2 m of brickearth overlying dark-stained gravel, the lower, coarsest part of which yielded a hand-axe and a few flakes. There is a strong indication, from surviving records of the Furze Platt workings, that implements, particularly the unabraded, well-made examples, were concentrated at the base of the gravel, in places resting directly on the Chalk (Treacher, 1896; Wymer, 1968, 1977c; Roe, 1981; Cranshaw, 1983). According to Roe (1981), the total number of artefacts from this context at the Furze Platt sites exceeds 2500.

A section re-excavated at the Cannoncourt Farm Pit GCR site in April 1987 confirmed the preservation there of nearly 4 m of bedded gravel (Figure 3.15). This and recent investigations in the area to the north, where housing development has taken place, enabled comparison with exposures in a current working quarry at Switchback Road, less than 1 km to the north (Harding *et al.,* 1991; (Figure 3.14)). These sections have allowed a more detailed analysis of the sediments than had been attempted previously. A variable thickness of sandy, silty clay, often with gravelly inclusions, was found to be prominent above the Lynch Hill Gravel throughout the area. This material is repeatedly let down through the gravel in a profusion of large pipes, resulting from solution of the Chalk bedrock. In a small area between Cannoncourt Farm Pit and Cooper's Pit, the clay is itself overlain by a later gravel containing more local material than the Lynch Hill Formation (Table 3.2). The clay beneath this upper gravel is mottled and reddened and contains evidence of a palaeosol (Harding *et al.,* 1991; see below).

Interpretation

There is an extensive history of publication on the deposits at Furze Platt and their Palaeolithic content. Of particular significance was a Geologists' Association excursion visit to the locality in 1909, under the directorship of L. Treacher and H.J.O. White, who introduced on this occasion (Treacher, 1909) the idea that two distinct terraces existed in the area within the highest of the three originally recognized by Whitaker (1889). The higher of these two divisions of the 'High Terrace' (now recognized as the Boyn Hill Gravel) was exposed in a pit near Furze Platt church, in which several abraded artefacts were found, whereas the lower was represented at 'Cannoncourt (Furze Platt lower pit)', where the artefacts were more varied and less abraded (Treacher, 1909, p. 199). The latter working, almost certainly Cooper's Pit (Figure 3.14), had at that time recently been abandoned, although a new pit opened nearby had already yielded a number of implements (Treacher, 1909). It seems likely that this newer working was the site later to be known as Cannoncourt Farm Pit and that records from before this date (Treacher, 1896, 1904; Shrubsole, 1906) all refer to Cooper's Pit.

The majority of the implements from Cannoncourt Farm Pit were discovered during the period from 1909 to 1931, mainly by the gravel diggers, who sold them to collectors, notably Llewelyn Treacher of Twyford and George Smith of Reading (Wymer, 1968; Cranshaw, 1983). Cranshaw (1983), after studying the numerous unpublished records that accompany the collections, concluded that 1919 probably marked the acme of hand-axe discovery. In this year a famous implement, 32 cm long, was unearthed in Cannoncourt Farm Pit by a gravel digger, Mr G. Carter, who achieved acclaim as the discoverer of many fine hand-axes (Lacaille, 1940; Wymer, 1968; (Figure 3.16) and (Figure 3.17)a. Many of these were of the slender pointed variety known as 'ficrons' (Figure 3.17)b. The 32 cm implement remains the largest British hand-axe, its enormous size leading to speculation that its intended purpose may have been ceremonial (Wymer, 1968; MacRae, 1987). By the end of the 1930s, over 1600 hand-axes had been recovered from Furze Plan, mostly from the newer pit (Roe, 1968b). No formal descriptions of the site or of the Palaeolithic assemblage were published during this period, however, although they were briefly mentioned in the Beaconsfield Geological Survey memoir (Sherlock and Noble, 1922).

Warren (1926, 1933) followed Treacher in recognizing the gravel at Furze Platt as distinct from the established (Boyn Hill and Taplow) terraces of the Middle Thames. He ascribed the artefacts from these deposits to his 'Grays Inn Lane Group',

named after the site (in London) of the earliest recorded discovery in Britain of a Palaeolithic hand-axe, in 1690 (Evans, 1860). In a footnote, Warren (1926, p. 43) suggested that the gravels in which these artefacts occurred might be separated under the name 'Furze Platt Stage'. Warren (1933) further developed this theme by linking the Furze Platt industry with that from Swanscombe (Middle Gravels), both being assigned to his 'Grays Inn Lane Group'. Warren (1942) also correlated the Furze Platt aggradation with Palaeolithic gravels at Stoke Newington (Smith, 1894) and Leytonstone; he assigned the Clactonian gravels of Swanscombe (Lower Gravel), Grays and Clacton itself to the early part of the 'Furze Platt Stage'. In a brief review of the Thames sequence, Wright (1937), alluding to the deposits at a lower level than the Boyn Hill Gravel, adopted the name 'Furze Platt Terrace'.

Lacaille (1940, p. 247) also recognized three terraces above the floodplain in the Maidenhead area; he stated that: The Taplow Terrace, which is the most distinct, is banked against another terrace, the ground-surface of which, east of Cannoncourt Farm, stands between 154 ft and 140 ft O.D. A shelving and undulating rise of some 20 ft marks the step to another terrace, attaining a maximum surface altitude of 171.5 ft above O.D. and 93 ft above the Thames, which rests on Chalk and extends southward. This includes the classic locality of Boyn Hill'. Lacaille recognized his 'Lower Boyn Hill Terrace' (the middle of these three, now classified as the Lynch Hill Terrace) on both sides of the river. He described exposures in the deposits of this terrace at various sites, including Cannoncourt Farm Pit.

King and Oakley (1936) believed the Furze Platt (Lynch Hill Gravel) deposits and the higher Boyn Hill Gravel to be the product of a single aggradation, built up over two separate erosional 'benches' (Figure 3.18). They regarded the abraded artefacts from the Boyn Hill Terrace *sensu stricto* at Maidenhead as having been reworked from industries in the lower gravel (that now attributed to the Lynch Hill Formation), such as at Furze Platt. They assigned this single aggradational phase to their 'Middle Barnfield Stage', supporting Warren's (1933) correlation of the industries of Furze Platt and the Swanscombe Middle Gravel. King and Oakley also recognized another aggradational phase between the Boyn Hill and Taplow Terraces, their 'Iver Stage' (based upon observations at Iver by Lacaille). Unlike that at Furze Platt, the deposit at Iver contains Levallois flakes, together with hand-axes in abraded condition. This suggested to King and Oakley that the Iver deposits were later than those at Furze Platt. However, Gibbard (1985) followed Hare (1947) in assigning the gravels at both Furze Platt and Iver to the Lynch Hill Formation. According to Gibbard, the Levallois industry at Iver was derived from an accumulation of fine-grained sediments above the Lynch Hill Gravel, dominated by wind-blown silt (loess). He assigned these fine-grained sediments to his 'Langley Silt Complex', which overlies (and therefore post-dates) the Lynch Hill Gravel, thus vindicating King and Oalkey's interpretation of the archaeology.

The geomorphological and geological approaches of Hare (1947) and Gibbard (1985) produced very different interpretations of the fluvial sequence to those based on archaeology, however. Hare was unable to accept King and Oaldey's single Furze Platt/Boyn Hill aggradation; he noted that the Furze Platt gravels underlie a separate terrace surface, lower than the true Boyn Hill level, which he named the Lynch Hill Terrace. Oakley (in Hare, 1947) suggested that later erosion could have produced this lower terrace feature within the single aggradation previously envisaged, a view that has continued to receive occasional support (see Wymer, 1977c; Roe, 1981). However, Cranshaw (1983) reversed King and Oaldey's argument, suggesting that occasional abraded and undistinguished artefacts found at Furze Platt might have been reworked from the (older) Boyn Hill aggradation, which is characterized by similar implements. Conversely, it is clear from the various records that the well-preserved and skilfully made hand-axes found in Cannoncourt Farm Pit around 1919 have no parallel, abraded or otherwise, in the local Boyn Hill Gravel. Such implements would be expected to appear in the latter formation, in reworked condition, if the stratigraphy advocated by King and Oakley was correct. Detailed mapping by Gibbard (1985) of the two separate sediment bodies, the Boyn Hill and Lynch Hill Gravels, appears to have resolved this issue in favour of an interpretation of the Furze Platt deposits as later than those of the Boyn Hill Formation, in line with conventional terrace stratigraphy (Figure 3.18).

Roe (1964), in his statistical analyses of Palaeolithic collections, used the Furze Platt assemblage as an example of a 'Middle Acheulian' industry. This study demonstrated similarities and differences in typology between the Furze Platt industry and those from other British Lower and Middle Palaeolithic sites. The site was also described by Roe (1968a, 1981) in his analysis of British Lower and Middle Palaeolithic hand-axe types. Roe's analyses confirmed the similarity of the Furze Platt artefacts to an assemblage from an identical stratigraphical situation, concentrated near the base of the Lynch Hill Gravel, on the opposite (eastern) side of the Thames at Baker's Farm [SU 958 822]. This was another pit from which collections were assembled by Treacher and Lacaille (Lacaille, 1940, 1960; Wymer, 1968). Roe (1968a, 1981)

also grouped the Furze Plan industry with those from Stoke Newington and Cuxton and suggested a Mindel–Riss (Hoxnian) age for these assemblages. Wymer (1968) considered the industry from Cannoncourt Farm Pit to belong to a single phase of the Acheulian culture, with a few rolled specimens possibly derived from earlier assemblages. He denied the occurrence of Levallois flakes or cores, as had been claimed by Lacaille, although he was more convinced by Levallois material collected by Lacaille from Baker's Farm.

The past few years have seen renewed research activity at Furze Platt. The small-scale GCR excavation in Cannoncourt Farm Pit in 1987 closely followed an appraisal by the Trust for Wessex Archaeology of the nearby Switchback Road Pit (Figure 3.14) prior to its extension (Harding *et al.,* 1991). In 1988 the same organization undertook a detailed study of those parts of the Cooper's Pit/Cannoncourt Farm Pit complex to the north of the GCR site, before and during construction of a new housing development.

These new studies included a detailed analysis of the sandy, silty clay overburden at the various sites. Particle-size and heavy-mineral analyses indicated that this material differs significantly from the 'Langley Silt Complex' of Gibbard (1985), as described elsewhere in the Middle Thames (Gibbard *et al.,* 1987). It seems instead to largely comprise sediment reworked, probably by solifluction, from the local Reading Beds. Of potential significance to the dating of the Lynch Hill Formation of the Middle Thames is the discovery of a palaeosol developed in this silty clay, beneath what appears to be a later tributary gravel (on the basis of clast-content — see (Table 3.2)). Micromorphological analysis of this buried soil horizon, which displays red-brown mottling not seen elsewhere in the silty clay, has confirmed that modification by pedogenesis occurred under temperate conditions prior to the deposition of the overlying gravel. If the latter deposit is attributed to a cold climatic interval, it being unlikely that a tributary stream could have carried gravel to this location during the Holocene interglacial (most such valleys in the area, being developed on Chalk, are dry at the present time), the palaeosol must date from a pre-Holocene temperate episode. This provides a minimum age for the Lynch Hill Gravel underlying the brickearth, which must pre-date the last interglacial (Harding *et al.,* 1991).

In fact, the correlation scheme for the Thames terrace sequence advocated in Chapter 1 suggests that the Lynch Hill Gravel is significantly older than this. It is ascribed, according to the climatic model for terrace formation also proposed in Chapter 1, to Oxygen Isotope Stages 10 (phase 2 gravel) and 8 (phase 4 gravel). Assuming the phase 2 part of the Lynch Hill Formation (see Chapter 1) to be present at Cannoncourt Farm Pit, this interpretation suggests manufacture of the artefacts that were found just above the Chalk surface during Stages 10 or 11. The latter age would indicate broad contemporaneity with the Swanscombe Middle Gravel industry, an interpretation that had been promoted, on typological grounds, by Warren (1933). However, it is also possible that the gravels overlying the Chalk at Furze Platt represent the phase 4 part of the Lynch Hill aggradation, in which case the artefacts could be later, dating perhaps from Stage 9 or early Stage 8. According to the correlations proposed in this volume, this would suggest a similar age to the assemblages from sites such as Stoke Newington, grouped with Furze Platt by Warren (1942) and Roe (1968a, 1981), and Purfleet (see Chapter 4). This alternative interpretation is perhaps the more likely, given the occurrence of artefacts showing Levallois technique at the related site at Baker's Farm.

Thus the Cannoncourt Farm Pit GCR site provides both a reference section in the Lynch Hill Gravel of the Middle Thames and a reserve of unexcavated ground to enable future research, including possible excavation to assess the Palaeolithic content of this formation. The site is one of the richest and most celebrated British Palaeolithic localities, a fact that is of considerable geological significance, given that the artefacts have all come from Thames gravel. Continuing research, both at Furze Platt and elsewhere, may soon provide an improved geochronological framework for this important Palaeolithic assemblage. Such studies will also provide more information about the geological history of the Lynch Hill Formation and related sediments, which form an important part of the Thames sequence.

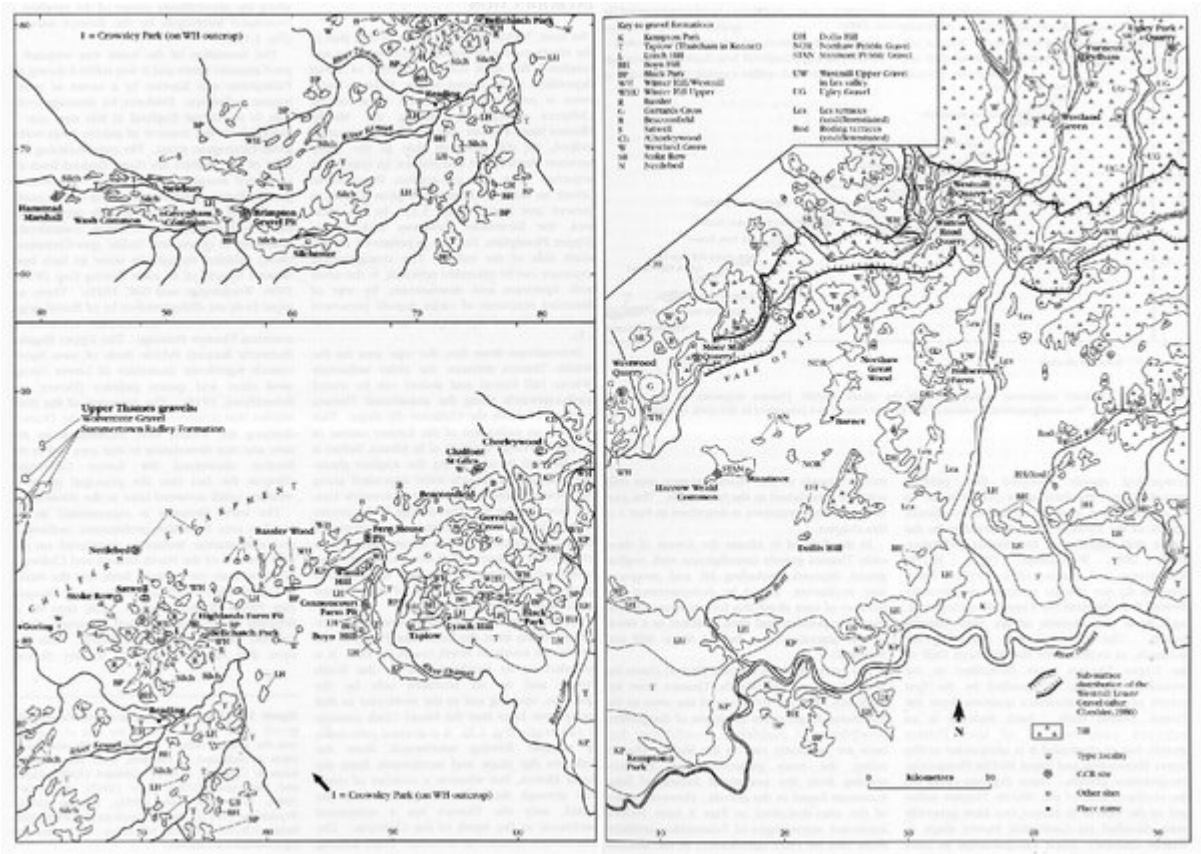
Conclusions

The deposits at Cannoncourt Farm Pit are part of the Lynch Hill Gravel of the Thames, one of the lowest in the celebrated 'staircase' of terraces preserved in the Slough area. Here, and at adjacent sites, this gravel has long been famous for yielding a profusion of man-made flint tools and the waste-flakes from their manufacture over 2500 such Stone-age artefacts have been found to date. Cannoncourt Farm Pit is particularly notable for the discovery there of the

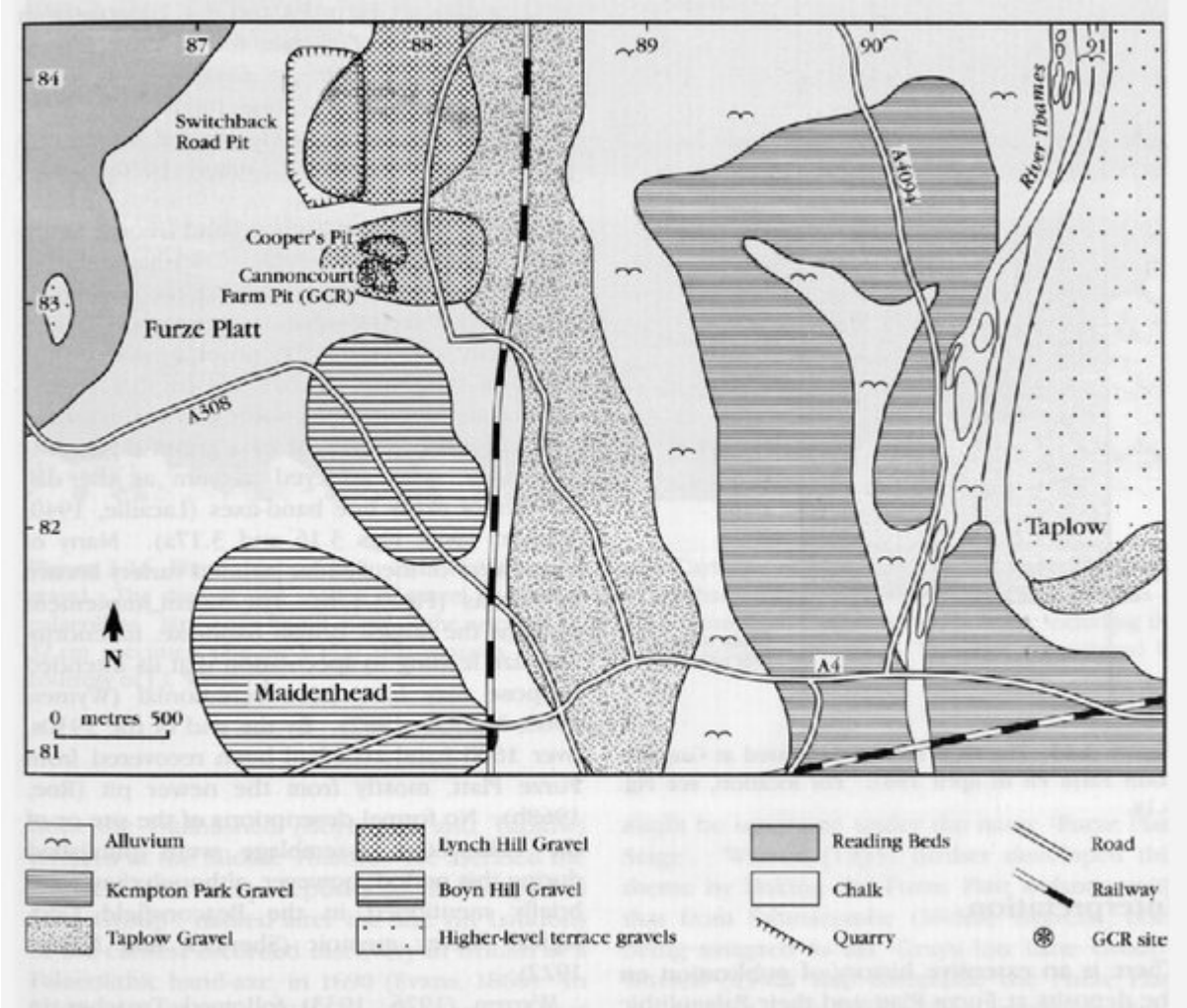
largest Palaeolithic hand-axe ever found in Britain.

The gravel at Cannoncourt Farm is overlain by a pebbly, silty clay deposit that, in places, has collapsed through the gravel into large solution hollows (pipes) that penetrate down into the underlying Chalk. Analysis of the silty clay shows that it is largely composed of redeposited material derived from the local Reading Beds (a much older set of sediments deposited around 60 million years ago), suggesting that it was formed not by the Thames, but through a process of slope movement, particularly during periods of intense cold within the Ice Age. A temperate-climate soil formed in this silty clay, preserved where it is buried by later gravel, indicates that there has been at least one temperate (interglacial) period since deposition of the Lynch Hill Gravel and the overlying cold-climate slope sediments.

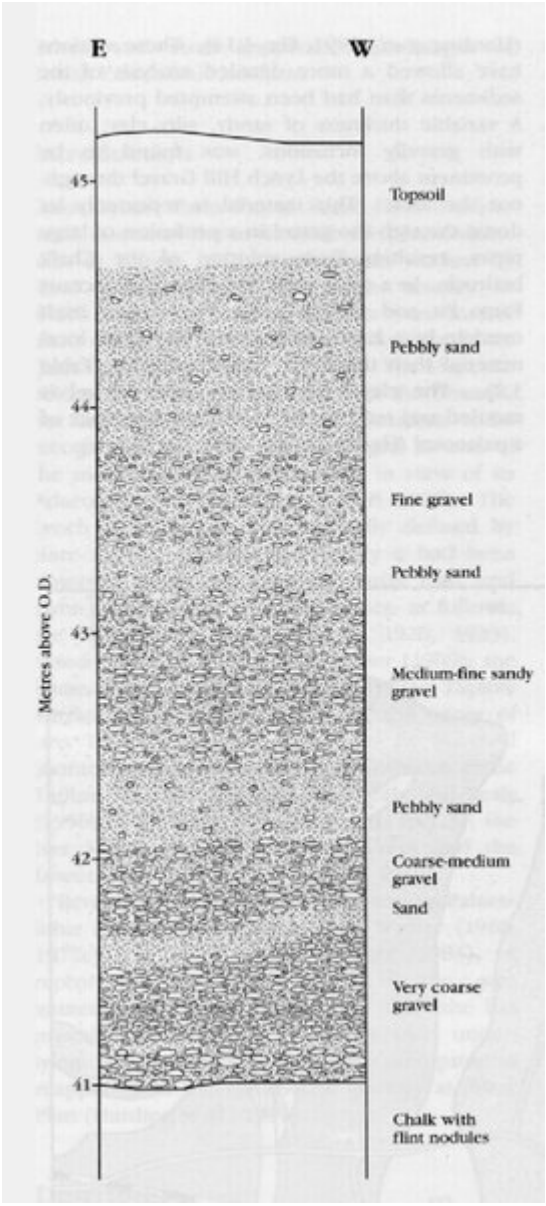
References



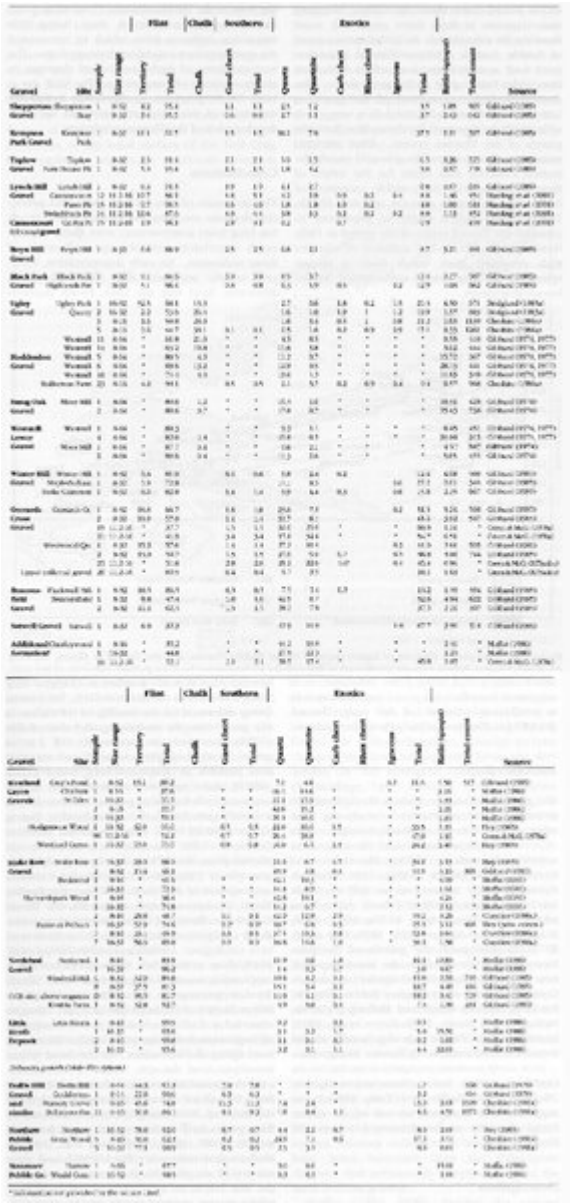
(Figure 3.1) (Following two pages) Map showing the gravels of the Middle Thames, the Vale of St Albans and the Kennet valley. Compiled, with reinterpretation as indicated in the text, from the following sources: Cheshire (1986a), Gibbard (1985), Green and McGregor (1978a), Hare (1947), Hey (1965, 1980), Sealy and Sealy (1956), Thomas (1961), Wooldridge (1927a) and the Geological Survey's New Series 1:50,000 and 1:63,360 maps. GCR sites and type localities are shown.



(Figure 3.14) Map showing the various sites at Furze Platt and their relation to the Pleistocene geology.

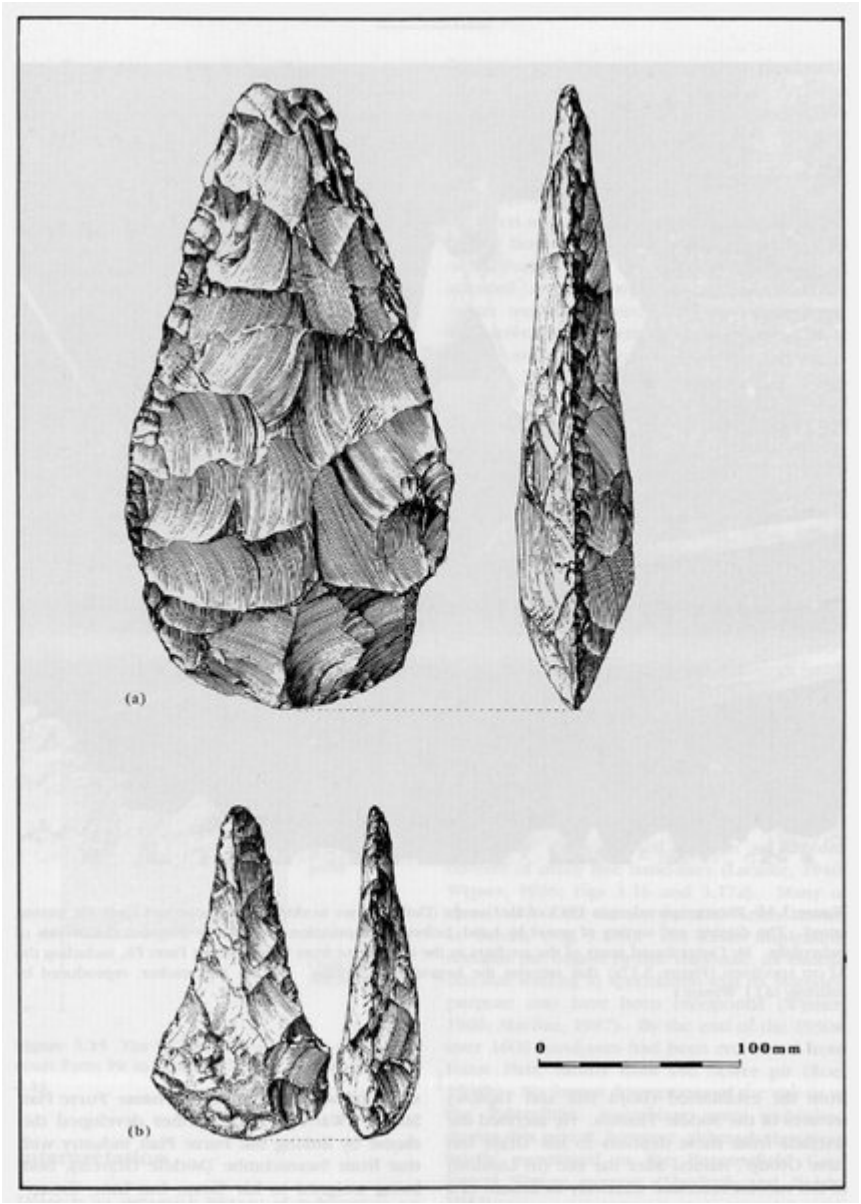


(Figure 3.15) The GCR section excavated at Cannoncourt Farm Pit in April 1987. For location, see Fig. 3.14.

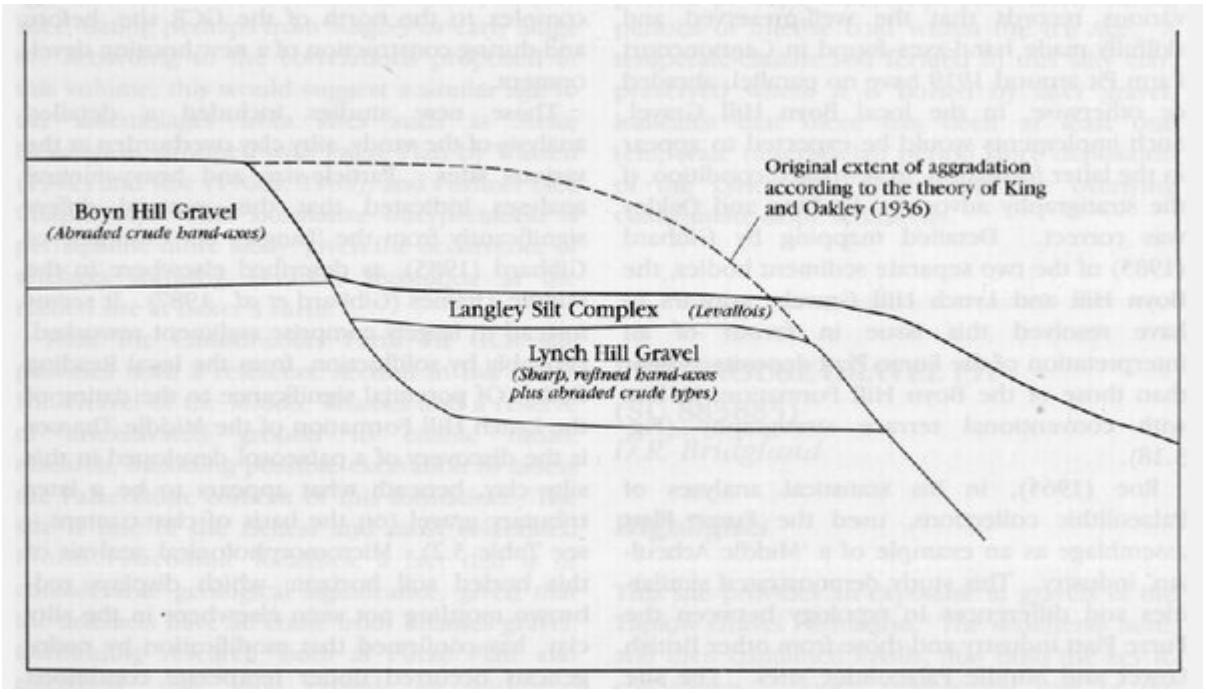


(Table 3.2) Clast-lithological data (in percentage of total count) from the Middle Thames and Vale of St Albans (compiled from various sources). The data concentrates on key sites, GCR sites and localities mentioned in the text. Note that many different size ranges are included and that these yield strikingly different data (this can be observed where results from different fractions from the same deposits have been analysed). As in (Table 4.2), (Table 5.1) and (Table 5.3), the igneous category includes metamorphic rocks (very rarely encountered) and the quartzite category includes durable sandstones. The Tertiary flint category comprises rounded pebbles (sometimes subsequently broken) reworked from the Palaeogene (see glossary with (Table 4.2)).

(Figure 3.16) Photograph taken in 1913 of Mr George (Deify) Carter working at Cannoncourt Farm Pit, sieving gravel. The digging and sorting of gravel by hand, before mechanization, resulted in frequent discoveries of palaeoliths. Mr Carter found many of the artefacts in the collections from Cannoncourt Farm Pit, including the 32 cm specimen (Figure 3.17a) that remains the largest from Britain. (Photo: L. Treacher, reproduced by courtesy of J.J. Wymer.)



(Figure 3.17) Hand-axes from Cannoncourt Farm Pit: drawings originally published by Laraine (1940). (a) The extraordinarily large pointed hand-axe found by Mr G. Carter in March 1919. This was acquired by L. Treacher and donated by him to the Natural History Museum. (b) A fine example of a 'ficron' hand-axe.



(Figure 3.18) Diagrammatic representation of the relations between the Boyn Hill and Lynch Hill Gravels and the Langley Silt Complex. The types of Palaeolithic artefacts that characterize each deposit are shown. Also illustrated is the interpretation of these deposits by King and Oakley (1936).