

Chapter 16

Lithic artefacts: Phases 1, 2, 3 and 5

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INTRODUCTION

This chapter presents the lithic material from the earlier phases of the site, prior to the abundant evidence of Phase 6, discussed subsequently (Chapter 17; Chapter 18). The tiny assemblages (n=1, in both cases) from Phase 1, the ‘tilted block’ (see below), and Phase 2, the ‘primary sump infill’ deposits to the west of the tilted block, are almost certainly non-artefactual. However their existence needs to be noted, and the possibility considered that they might have been worked. The assemblage from Phase 3 is not much larger (n=8), and includes some natural material, but it also includes three indisputably worked lithic artefacts. This makes it of importance, despite its paucity, as being the first definite evidence of hominin presence in the site sequence. No lithic material was recovered from Phase 4, which was only represented at the site by about 200mm thickness of silty clay in one small width (Log 40011) of the main west-facing section (see Chapter 4). Above this, there was a small assemblage (n=21) from the Phase 5 sands, which seems to represent another phase of hominin presence at the site prior to the main phase of occupation in Phase 6. It does, however, need to be considered whether the evidence that appears to be from Phase 5 is merely intrusive from the basal deposits of the overlying deposits, namely either from Phase 6 in the central and southern parts of the site, or from Phase 8 in the northern part of the site where these gravels directly cut into the Phase 5 sands.

PHASE 1

There is just one item forming the lithic assemblage from Phase 1, which is Δ.40063 from context 40056. This context is one of the intermediate beds in the tilted block sequence (Fig. 4.6a; Fig. 4.16; Chapter 4), comprising a grey sand that was equated with Thanet Sand. The artefact is a small, thin flint chip 12mm long in absolutely mint condition. A small area of dark green cortex on its butt suggests that it originates from a piece of Bullhead Bed flint. It was found whilst scraping the section clean for recording and sampling, and it is uncertain whether it was indisputably *in situ*, or whether it is intrusive, perhaps forced into the sediment in the course of the original mechanical excavation that created the face being

cleaned. If not intrusive, tiny flint chips and pebbles are occasionally present in Thanet Sand, although they are usually not quite so fresh as in this instance. It is also not recorded how close the chip was found to the adjacent context 40055, which consisted of a bed about 100mm thick of freshly fractured Bullhead Bed flint nodules with many very sharp chips and fragments. This chip is certainly insufficient evidence on which to argue for hominin occupation in Phase 1; it is probably intrusive from the context 40055, or was perhaps forced into the otherwise fine-grained sediments in course of mechanical excavation.

PHASE 2

The assemblage from Phase 2 also contains just one item. It (Δ.43943) is a medium-sized nodule of Bullhead Bed flint, c 150mm long and weighing almost 1kg, bearing a number of what look like scars from flake removals. It was found on the stripped floor of the site (Fig. 16.1), after mechanical excavators had cleared the path for the new roundabout link road. This was in the bottom context, 40077, of the Phase 2 sequence, which was a chalk rubble with occasional flint nodules that directly overlay the ‘tilted block’ (see Fig. 4.16). The nodule was damaged by heavy machine plant movement, with its upper exposed ridge having undergone obvious modern crushing, leading to formation of several flake scars up to 50mm long, the chips and flakes from which were still present in the ground, and which were also recovered. However, in addition to this obvious modern damage there was also several other larger flake scars, so the nodule was collected for further consideration as a possible artefact. Although originating from various directions, all of the larger flake-scars were on the upper exposed face of the flint nodule, when found, and some of them originated from the ridge with obvious modern crushing. Perhaps the least unconvincing evidence for ancient hominin interference is a battered patch at one end, the bottom-most end as shown in the photo (Fig. 16.1). This shows impact fractures from repeated blows by a hard object on the flattened edge of the nodule, leading to detachment of some cortical chips. This must either be from a hammerstone in the Palaeolithic, or by a modern attempt to shift the nodule by striking it with a shovel or a mattock. Perhaps the most likely possibility is that this battering results from the shovel-cleaning of the



Figure 16.1 Phase 2 assemblage: flint Δ .43943 *in situ* in ground

surface on which it was found, carried out prior to its discovery. On balance, it seems most likely that this is not a genuine Palaeolithic artefact, but a much-abused result of modern interference.

PHASE 3

In contrast to the earlier phases of the site, this is the first horizon where there is indisputable evidence of hominin presence. The lithic collection from the Phase 3 deposits contains eight finds (Table 16.1). More than half of these are ambiguous as to whether they are of natural or hominin origin, but at least three of them are definite artefacts, namely: Δ .50034 (context 40028), a cylindrical flint nodule from one side of which a single flake has been removed and with intense battering at one end; Δ .43219 (context 40061), a small mint condition flake, technologically undiagnostic, but bearing scars of earlier removals struck from the same direction (Fig. 16.2a); and Δ .43941 (also context 40061), a larger, chunkier flake struck across a cylindrical flint nodule, which shows the dorsal scar of a preceding removal struck from the opposite side of the nodule (Fig. 16.2b).

Within the sequence of contexts attributed to Phase 3, context 40061 was at the base, and comprises a chalk and flint gravel with frequent broken Tertiary shell fragments. This gravel was overlain on the eastern side of the site (see Fig. 4.6a) by a more sandy and clayey

deposit (context 40062), also with chalk and flint pebbles, and broken derived Tertiary shell fragments. This was equivalent to context 40028 on the west side of the site (Fig. 4.5a; b). These contexts are thought to represent slope-wash deposits, where they descend into the west edge of a rising water body.

The cylindrical flint nodule is battered on all of its protrusions, apart from on the end where the flake scar is present, where there are several very sharp and unabraded edges. The battering is particularly heavy at the other end of the nodule, where several cortical chips have flaked off, making it look very much like it has been used as a knapping percussor. The only doubt over whether this is a genuine percussor is because the battering extends over every protrusion of the flint nodule, and not just at its end. However, the battering is more intense at the end, and the scars from the cortical chip removals are fresh, supporting its interpretation as a percussor, and not just a simple core or tested nodule.

The two flakes are both technologically undiagnostic, although the larger one (Fig. 16.2b) has a natural cutting edge that would have made it a useful tool in its own right. Both flakes are unstained and unpatinated, and in mint or fresh condition, suggesting firstly, a minimum of post-depositional movement and therefore secondly, that they result from hominin activity on the banks of the water body.

The Phase 3 deposits produced a fully interglacial ostracod fauna (Chapter 11), so this appears to be

Table 16.1 Phase 3 lithic collection

Context	Find ID - Δ	Length (mm)	Weight (g)	Description and interpretation
40028	50034 *		954	Cylindrical nodule with a flake off; battering at one end possibly due to use as a percussor
40061	43219 *	40	16	A definite flint flake; unstained, unpatinated and in mint condition
	43220		80	Natural lump? Possibly irregular waste
	43241	38	5	Small thin flake; lacks clear striking platform but has dorsal scar; slightly patinated and abraded; probably natural
	43242		92	Natural lump
	43941 *	64	116	Another definite flint flake; medium-size, quite chunky flake in fresh condition, from cylindrical flint nodule; unstained and unpatinated
40062	43447		2	Small chip, probably natural
40159	43630		460	Cylindrical piece of flint nodule, probably natural

* definite artefacts

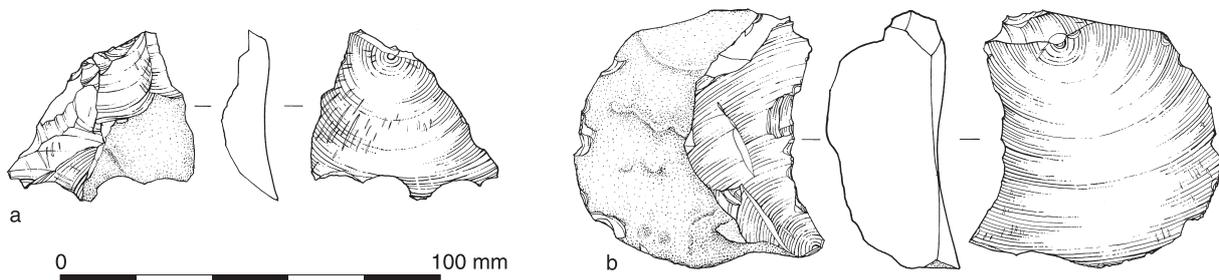


Figure 16.2 Phase 3 lithics: (a) flake Δ .43219 (context 40061); (b) flake Δ .43941 (context 40061) [ill. B. McNee]

evidence of hominin activity that pre-dates, by an uncertain time interval, the main evidence of activity in the Phase 6 clay. Despite the thickness of the deposits, about 3m, between the artefactual horizons of Phases 3 and the junction of the top of Phase 5 with the bottom of Phase 6, there is no sign of a major depositional hiatus or cold climatic conditions. This suggests that Phases 3 through to 6 were all laid down in the same temperate interglacial episode. The Phase 3 assemblage is far too small to consider its technological characteristics as representative of an industrial tradition. There is, however, nothing in the meagre assemblage to distinguish it from the slightly larger Phase 5 assemblage, or the very much larger Phase 6 assemblages.

PHASE 5

Disregarding three natural pieces, the worked flint collection from Phase 5 contained 18 artefacts, 13 of them in mint or fresh condition, and 5 of them in abraded or very abraded condition (Table 16.2).

The abraded assemblage all came from the northern end of the site, where the Phase 5 sands are directly, and unconformably, overlain by the Phase 8 gravels. More specifically, they also all came from the top part of the sands, based on the recorded positions of the artefacts and the recorded position of the gravel/sand junction in various section drawings near their find spots. There is unfortunately no more precise record of how close to

the gravel/sand junction the artefacts were found. Nonetheless, they are thought more likely to be from the sand rather than from the base of the gravel, as they are much less abraded than the majority of artefacts recovered from the gravel (Chapter 20). The Phase 5 sand is a fluvial deposit, although the increase in clayey laminations in its top part suggests the start of the stagnating and drying-up trend that is continued in the overlying Phase 6 clay. The artefacts were probably washed into the positions where they were found by episodes of higher energy water-flow, although it is unlikely they have travelled far due to their low level of abrasion. Thus they probably represent evidence of contemporary hominin activity near the edge of the fluvial water body, or on temporary dry surfaces within the water channel.

The abraded assemblage comprises one possible percussor and four flakes. The 'percussor' is a battered flint pebble, with battering on every protruding part. The fact that it has also clearly been naturally abraded makes it hard to distinguish any marks of hominin knapping from natural battering. It looks very natural, but was collected because it was an unusually large clast for the predominantly fine-grained Phase 5 deposits. The flakes are all technologically undiagnostic, hard-hammer struck, quite chunky and of medium size, and all with varying amounts of cortex, ranging from *c* 15% to, in one case, 95%. They thus seem to represent sporadic knapping activity applied to freshly and locally collected raw material.

Table 16.2 Phase 5 lithic collection

	5 - Percussor (?)	10 - Tested nodule	20 - Core	30 - Core-on-flake	40 - Core-tools	50 - Handaxe-on-flake	60s - Fl-tools	80 - Fl-flakes	90 - Flakes	100 - Irreg. waste	Sub-total (n)
Phase 5 - Fresh	-	2	2	-	-	-	1	-	5	3	13
%	-	15.4	15.4	-	-	-	7.7	-	38.5	23.1	
Phase 5 - Abraded	1	-	-	-	-	-	-	-	4	-	5
%	20.0	-	-	-	-	-	-	-	80.0	-	
Phase 5 - All	1	2	2	-	-	-	1	-	9	3	18
%	5.6	11.1	11.1	-	-	-	5.6	-	50.0	16.7	

The fresher assemblage from Phase 5 (Table 16.3) mostly comes from the central part of the site, between Trenches B and C, and was found during machine excavation in this area, which was continued into the top c 0.5m of the Phase 5 sands. A few artefacts in fresh condition were also found on the east side of the site, north of Trench A, and a single one was found in the bottom spit of Evaluation Trench IV, south of Trench D. As with the abraded assemblage, they were all recovered from the top part of the Phase 5 sands, without precise records of how close to the junction of the overlying deposit. In this case this was usually the Phase 6 clay.

Despite the possibility that some of this assemblage is intrusive from the overlying Phase 6, all of it was well-provenanced to horizons well below the main archaeological levels of Phase 6, so it nonetheless represents

evidence from a different, and earlier, phase of occupation. The presence of hominin artefactual evidence is wholly compatible with the depositional environment in the top of the Phase 5 sands, where a sharp increase in thickness and frequency of clayey beds suggests cessation of fluvial deposition and development of quiet conditions.

The fresh condition of the artefacts suggests minimal post-depositional disturbance and reworking, so they probably represent intermittent activity on temporarily exposed dry surfaces, at a time when the fluvial regime associated with deposition of the Phase 5 sands was coming to an end, with the water-body stagnating and drying-up. At this time there was perhaps some colluvial input from the valley sides, which may have introduced some of these artefacts into their location of discovery.

Table 16.3 Phase 5, fresh assemblage (see Table 15.4 for description of 'tech group' codes)

Tech group	Find ID - Δ	Context	Area, Trench	Whl	%Cx	DSC	WtG	Notes
10 -Tested nodules	43836	40025	B-C	-	-	-	2015	Split slab of tabular flint; heavily frost-fractured
	43837	40025	B-C	-	-	-	1150	Rounded, cylindrical part of nodule, smooth cortex
20 -Cores	43839	40025	B-C	1	6	6	485	Globular core with three main removals; remaining flint looks accessible and good quality (Fig. 16.3a)
	50144	40025	A-B	1	0	13	890	Globular core with numerous removals; remaining flint looks inaccessible and frost-fractured
63 -Notched flake-tool	43808	40025	B-C	1	5	1	335	Large flake with single notch (Fig. 16.3b)
90 - Flakes	43834	40025	B-C	1	5	2	99	Quite large flake, migrated platform
	43856	40025	B	1	0	4	18	Small flake, migrated platform
	50109	40025	A-B	1	6	2	8	Small flake on derived Tertiary pebble; stable platform
	50060	40072	N of A	1	7	2	33	Small flake, stable platform
	50166	40025	A-B	1	4	6	575	Large thick flake, stable platform; several well-developed ring-cracks and Hertzian cones indicate very violent knapping
100 - Irregular waste	40818	40025	Tr IV (spit 11)	-	-	-	25	Small lump with combination of natural frost-fracturing and scars from deliberate knapping
	43824	40025	B-C	-	-	-	794	Large globular lump, heavily frost-fractured but some conchoidal rippling suggests knapping removals
	43835	40025	B-C	-	-	-	85	Small frost-fractured lump; possibly entirely natural

The raw material in the assemblage is very varied, although all being typical flint of the Swanscombe area. The cortex on one of the tested nodules is abraded smooth and a relatively dark blueish-grey, suggesting a history of derivation and transport prior to collection for attempted knapping. The cortex of most of the other artefacts is white, and in a fresh rough condition, suggesting a minimum of transport and reworking after the original derivation from Chalk bedrock. One of the smaller flakes ($\Delta.50109$) has a smooth rounded dark grey battered outer surface, indicating the raw material used was a derived Tertiary flint pebble.

Technological and typological details of the assemblage are provided in the summary table (Table 16.3). As a group, the assemblage is entirely compatible with a typical Clactonian industrial tradition (see Chapter 22 for discussion of the definition and recognition of 'Clactonian'). There is a combination of firstly, flake production by a simple unstructured approach to core reduction, with a combination of episodes of repeated flaking from the same striking platform ('stable platform') and *ad hoc* changing of the striking platform to one of the scars from a previous removal ('migrating platform'); and secondly,

the secondary working of one flake to make a notched flake tool. However, the small size of the assemblage means that it cannot be unequivocally accepted as representing a Clactonian industrial tradition.

The raw material shows a high incidence of frost-fracturing, particularly in the larger tested nodule and the larger of the two cores, which has probably influenced the cessation of reduction. In contrast, reduction of the smaller of the two cores (Fig. 16.3a) was stopped when it still had plenty of good quality flint available, and which was easily accessible from a range of possible striking points. Most of the flakes had more than 50% cortex (Table 16.3), indicating they were from reasonably early in their respective reduction sequences.

There is one secondarily worked flake in the fresh assemblage, a large flake from which a single notch has been struck at the distal end (Fig. 16.3b). Prior to this removal, the remainder of the perimeter of the parent flake would have been entirely cortical and not much use for cutting. After it, there was a slightly concave and very robust sharp edge formed, and it is reasonable to suggest, therefore, that this artefact can be regarded as a deliberately formed flake-tool, to facilitate cutting.

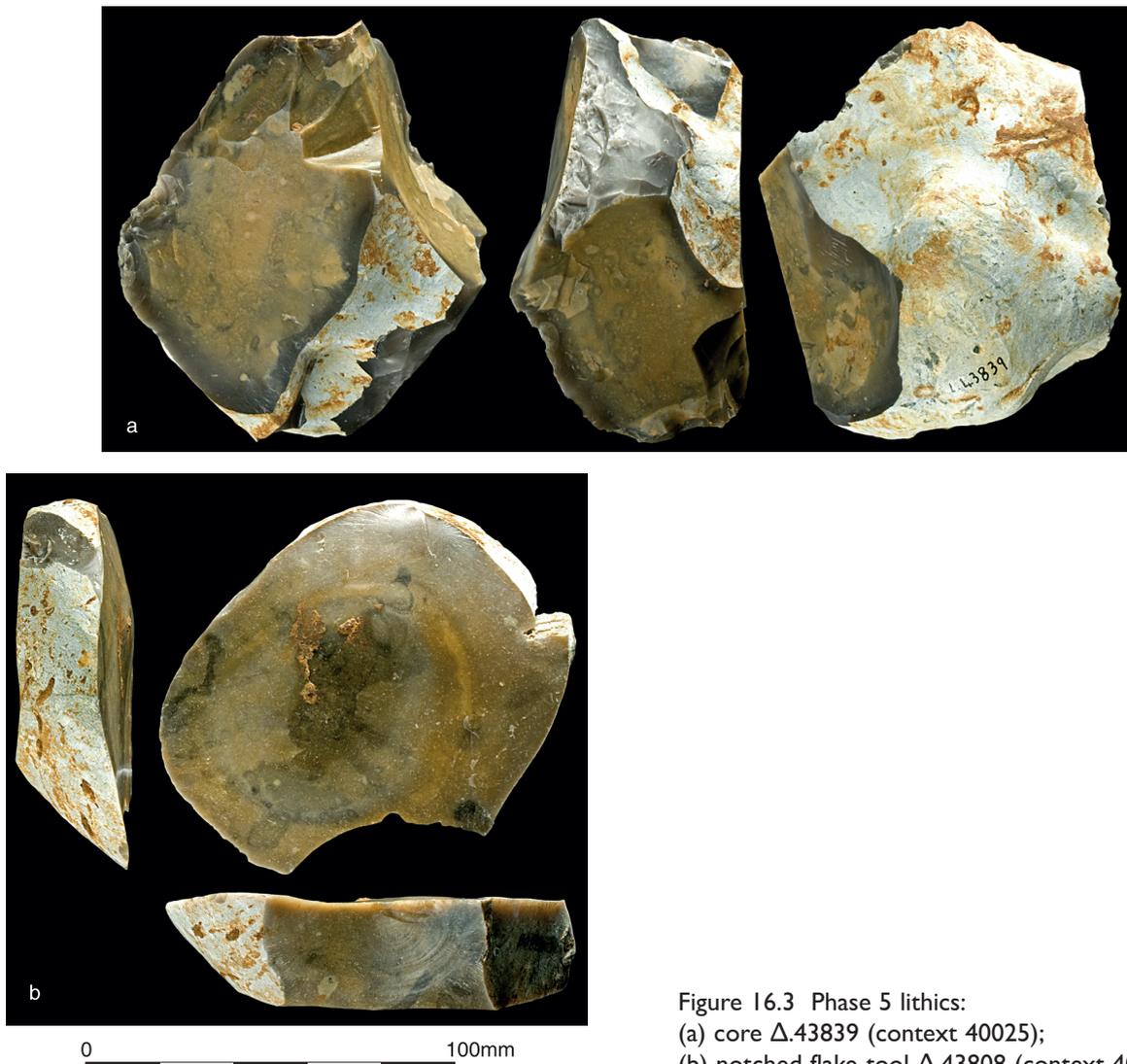


Figure 16.3 Phase 5 lithics:

(a) core $\Delta.43839$ (context 40025);

(b) notched flake-tool $\Delta.43808$ (context 40025)

DISCUSSION AND CONCLUSIONS

The assemblages discussed in this chapter are of small size, but represent occupation at, or nearby, the site at an earlier stage than the main occupation evidence of Phase 6 (Chapters 17 and 18). The tiny assemblages from Phases 1 and 2 are probably not of Palaeolithic hominin origin. However, the small assemblages from Phases 3 and 5 include sufficient indisputable artefacts to demonstrate hominin presence. The ostracod fauna from Phase 3 (Chapter 11) indicate prevailing interglacial conditions, and there is nothing in the sequence between Phases 3, 5 and 6 to indicate a major depositional hiatus or evidence of climatic cooling. It therefore seems likely that the lithic material from Phases 3 and 5 represents earlier hominin activity in the same interglacial episode as represented in Phase 6.

Although the assemblages are too small to make reliable generalisations, both assemblages are technologically and typologically indistinguishable from the much larger Phase 6 collection. There is evidence of on-the-spot production of flakes from a range of lithic raw

material, applying a relatively unstructured knapping strategy based on removal of one or more flakes from one platform before migrating to another. The presence of a high proportion of cortical flakes reflects the early stages of production, in turn suggesting that the raw material was locally acquired, unless minimally worked flint nodules were being moved around the landscape, which would be surprising. The rough condition of the cortex on the majority of artefacts suggests the raw material had not been affected by fluvial transport or by major slope-wash abrasion. However, the high incidence of frost-fracturing (which clearly predates the knapping, as many of the knapping fracture planes are visibly affected by pre-existing frost-fracture planes) reflects prolonged exposure to the elements, presumably the glacial cold of MIS 12.

Establishing the raw material source is an important part of reconstructing patterns of mobility in relation to knapping activity and site usage. This is considered in more detail for Phase 6 (Chapters 17, 18), where there is much more evidence, including the recovery of abundant non-artefactual flints in the Phase 6 collection.