TEST-PITTING FOR PREHISTORIC ARTEFACTS NEAR BRADWELLMOOR BARN, 1995

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INTRODUCTION

The site near Bradwellmoor Barn, the quarry that threatens to remove a triangular patch of it, the fieldwork conducted there in 1990 and 1994, and the artefacts found then have been described in another volume of the *Journal* (Guilbert *et al.* 1995). The prime objective in those previous years was to investigate a series of undulations thought to be earthworks and supposed to relate in some way to patterns of settlement and/or clearance evident in an adjacent, boulder-strewn tract of land. This tract has escaped agricultural improvement in the recent past and is tentatively regarded as a preserved area of prehistoric landscape, though strictly undated. However, an assemblage of flint and chert artefacts, recovered quite by chance during trenching of the earthworks, provided evidence for late-Mesolithic/early-Neolithic activity on this northern fringe of the limestone plateau of the White Peak. What is more, the artefacts were not distributed evenly between the trenches: two of chert came from trench 1 and twenty-seven of flint from trench 2/4, while trench 3 produced eighteen of chert and three of flint. These disparities invited more particular investigation, and our previous report concluded with, what seemed at that time, a forlorn plea for further fieldwork, specifically to pursue this interesting aspect of the results. Hence, it is a pleasure to report now that a change of fortune since then, entirely due to an initiative of the Peak Park Joint Planning Board (PPJPB), made it possible to return to the site in October 1995. In the event, this renewed fieldwork could not be directed simply at exploring the previously-recorded disparities; rather, it was driven by considerations relating to the management of the site, with the principal purpose of defining the extent of the prehistoric remains within this triangle of apparently-unploughed pasture perched on the edge of an extensive limestone-quarry (see Guilbert *et al.* 1995, fig. 1 for maps locating the site). Depending upon the results achieved by the chosen method of investigation — namely, the excavation of test-pits — it was hoped that the threat of destruction might be lifted from the more significant parts of this land.

The test-pitting strategy was determined by GG in consultation with his co-authors and with Ken Smith (of PPJPB), with due regard to the inevitable constraint imposed by the amount of funding available. The work was supervised in the field by SM, while DG advised on the identification of lithic artefacts (not easy in a subsoil which is naturally laden with chert). Copies of the full archives of information relating to the excavations and the artefacts have joined those from previous years in the Sites & Monuments Records held by PPJPB and by Derbyshire County Council, as well as those in Sheffield City Museum, where the 1995 artefacts have also now been deposited.

TEST-PITS

The test-pits were distributed over that part of the triangle which appears to be under the most imminent threat from the quarry, mostly lying to the south of the 1990-4 excavations (Fig. 1). Thirteen test-pits were excavated (numbered 5-17, in sequence from previous trenches 1-4), each measuring 1m square, and set out at gridded intervals of 10m. In each case, the turf was removed as thinly as possible, and thereafter the soil was excavated by trowel in spits averaging 0.05m thick. Each test-pit passed through the full thickness of the loamy topsoil, which varied from 0.05m to 0.18m, being generally thicker in the more eastern pits (though some in the western row gave indications that part of the topsoil there had been scraped off by the toothed bucket of a machine, perhaps during construction of the adjacent road-embankment in 1962). Each test-pit also penetrated the undisturbed subsoil by anything from 0.03m to 0.10m, depending upon the character of the deposits, which were generally orange-brown and clayey, with a variable content of fractured, tabular, grey chert. In places, well-rounded peaks of limestone bedrock projected through this mantle of subsoil, which is presumed to be a drift deposit, though its exact geomorphological origin remains unclear. No archaeological features were observed in the subsoil/bedrock, though the ground and weather-conditions were well suited to their detection had any existed in the base of any of the test-pits.

All soil trowelled from every test-pit was sieved through a 6mm mesh in an attempt to ensure a consistent level of artefact-recovery. Besides three small sherds of Post-Medieval pottery (from test-pits 8, 13 and 15), the only artefacts produced by this method were twenty-three pieces of worked stone, nine from topsoil, the rest from the upper part of the subsoil.

In addition, the relatively coarse material retained by the sieve was kept separate from the finer material that passed through it; and the coarser residue, comprising largely fragmented chert, was subjected to secondary sampling (by DG), designed to test the criteria applied by each of the excavators in accepting or rejecting particular pieces of stone as artefacts. The necessity for this secondary stage of the fieldwork was recognised before test-pitting began, since it was known that the subsoil of this site naturally contains abundant chert fragments, varying from cream to pale grey. Most of this is angular and thermally fractured, but it may have been possible to work it into artefacts in prehistory. Each sample was of approximately equal size, being a cone of the residue measuring *c.*0.20m in height. Each was checked by spreading it piecemeal and thinly over the bottom of a light-coloured container, which was then agitated and checked repeatedly for flaking-debris before that portion of the sample was discarded. This process yielded nine further worked items, including the only pieces recovered from test-pits 6, 9, 11, and 12. This may suggest differing capabilities on the part of different excavators, and therefore raises the possibility that the detail of the recorded pattern of distribution (Fig. 1, and see below) is not reliable. Nevertheless, the residue-sampling has at least allowed some confidence that no major concentrations of worked stone were missed in any of the relatively unproductive test-pits.

ARTEFACTS

Thirty of the thirty-two items of worked stone recovered from the 1995 test-pits comprise chert of a pale grey variety, like that indigenous to the site; and these may reasonably be regarded as of local origin. The exceptions are a small blade of translucent flint (from test-pit 13) and a

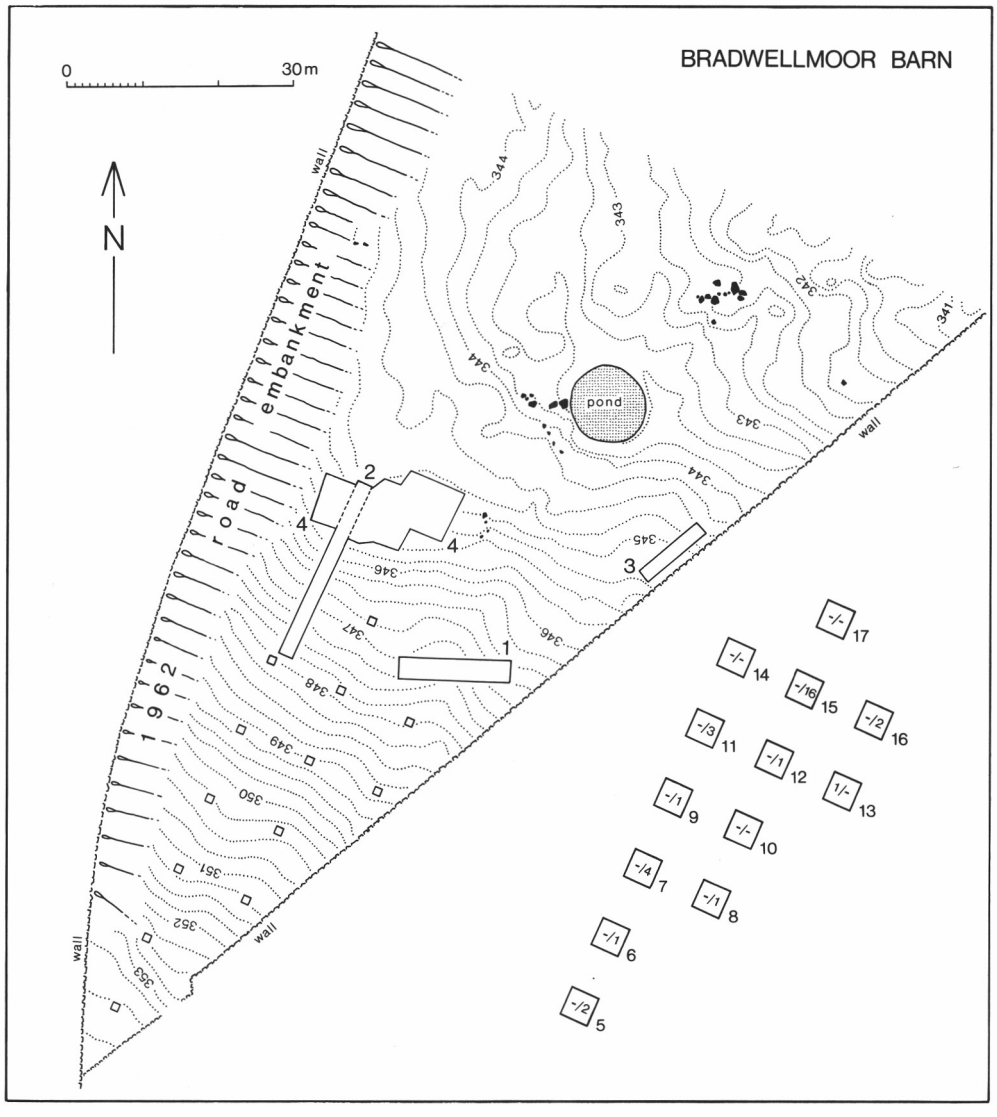

Fig. 1 Bradwellmoor Barn: disposition of the 1995 test–pits (squares) in relation to the 1990–94 trenches (numbered 1–4 and outlined), within the 1990 contour–survey; scale 1:1000 (cf. Guilbert *et al.* 1995, fig. 1). At lower right, test–pits 5–17 are shown correctly disposed but enlarged, and the digits within each square represent the totals of worked flint/chert found in it.

spall of black chert (from 12), matching the only two materials represented among the prehistoric finds from the earlier excavation of trenches 1-4.

The indigenous chert is of variable quality and size, but all bar two of the flakes and spalls in this material (both from test-pit 15) are undoubtedly struck pieces. The possibility that they were struck accidentally must be considered, particularly as many are primary flakes with a naturally-shattered dorsal surface. However, ten also show evidence of prior flaking on the

dorsal surface; and, since nine of these came from test-pit 15 (the other from 11), it seems reasonable to infer that at least these result from being struck intentionally. Moreover, much of the naturally-shattered chert on this site is fully opaque, while some of the flakes tend towards semi-translucency, suggesting that this chert may have been selected for working because of its similarity to flint.

All of the flakes and spalls of this grey chert are small. This might be interpreted in several ways: any larger flakes resulting from the same episode(s) of knapping could have been removed for use elsewhere; or it could be that flake-blanks were re-shaped here; or frost-shattered pieces could have been shaped minimally for expedient use; or these flakes and spalls could result from using chert as hammers and/or anvils. This intractable, frost-shattered chert must have been difficult to work in a controlled manner, and it may be that this debris does not wholly match the intentions of the knapper. Whatever the cause, the net effect is that these chert artefacts are undatable typologically. Only the flint blade is typical of late-Mesolithic assemblages, which means that it could be contemporary with the scatter of flintwork found in trench 2/4.

Comparison of the finds from the 1990-94 trenches with those from the 1995 test-pits reveals a series of contrasts. Most obviously, there are no retouched tools or cores among the artefacts found in the test-pits, whereas the trenches produced a range of such items (Guilbert *et al.* 1995, 31). In addition, the pieces from the test-pits are much smaller than those from the trenches, though this may merely reflect the different method of excavation of the trenches, involving machine-stripping followed by rapid hand-digging, and with little sieving (Guilbert *et al.* 1995, 29). This methodology would have made it difficult to discriminate small artefacts of grey chert from the fragments of that material occurring naturally in the subsoil. On the other hand, even systematic sieving of the test-pits produced only three items large enough to have been selected for use; and, of these, only the flint blade has edge-damage that could have been caused by use (the two largest flakes of grey chert, both from test-pit 11, show no macroscopic sign of having been used). Even so, the bias introduced by the different means of investigation cannot mask the contrasting characters of the two collections of artefacts — i.e. groups of curated tools and blanks from the trenches as compared with the debris of manufacture from the test-pits.

Another contrast is seen in the raw material chosen for the manufacture of artefacts, with the indigenous, grey chert predominating in the test-pits, while the trenches yielded only flint and black chert, perhaps for the methodological reason already stated. Both the flint and the black chert were probably imported to this site, though not necessarily from any great distance in the case of the black chert, which has been observed by the authors at various locations within the Carboniferous limestone, including some at little more than 1km to the east of Bradwellmoor Barn. Moreover, one block of black chert, up to 0.10m across, occurred in the subsoil exposed at the bottom of test-pit 14, while occasional smaller lumps of it were noticed in a disturbed area of subsoil situated a short distance to the east of the pond (Fig. 1; and see below). Orange-brown, translucent flint like that found in trenches 2/4 and 3, as well as in test-pit 13, is most likely to have come from the Irish Sea Tills or the Avon Terraces, well to the west and south of the White Peak, though this could only be verified by analysis of micro-fosssils contained within it (Brooks 1989).

A final contrast lies in the typology of the artefacts, for most of those from the test-pits are undatable, whereas many of those from the trenches are typical of a late-Mesolithic/early-Neolithic blade-technology (Guilbert *et al.* 1995, 31).

PATTERNS OF DISTRIBUTION

The distribution of lithic artefacts recorded by the 1995 test-pits (Fig. 1), with a high proportion of items from one spot (test-pit 15 yielding sixteen of the thirty-two found), appears to indicate an original pattern characterized by pronounced clustering of such objects, much as was inferred from the previous excavations here (Guilbert *et al.* 1995, 32). However, this is where the similarity of the 1990-94 and the 1995 results ends, and the contrasts between these assemblages have been emphasized above.

The evidence for the working of three distinct types of stone — one or two local, one or two imported — within a small area of the same site is of potential interest; as is that for the virtually-discrete distributions of the three types, at least in so far as this is documented by our record. The possible interpretations of this pattern are wide-ranging: at one extreme, it could represent the segregated use of different raw materials and tasks across the site in a single episode of activity; at the other, it may reflect separate visits from groups of people using different technologies for working stone. In the latter scenario, it could be quite incidental that the different episodes of activity occupied much the same location, unless its moderately-sheltered aspect, in the lee of a localized declivity within the windswept plateau, was what attracted successive groups to this spot (Fig. 1; Guilbert *et al.* 1995, 28). How far these 'occupation(s)' extended to the north, away from the foot of the steeper slope, is uncertain; but it may be noted that an area covering over 1000 square metres to north and east of the pond was heavily disturbed by machinery shortly before the test-pitting was undertaken, and a careful search of this was rewarded with no flint or chert artefacts. It should not be forgotten that the ditch-terminal excavated in 1994 lies at this very break of slope, amid the scatter of flintwork, though it must be stressed that no claim can be made to have established their contemporaneity (Guilbert *et al.* 1995, 28-30).

Ultimately, only more extensive excavation, conducted with equal care as the 1995 test-pits, can offer any expectation of distinguishing between the conflicting explanations debated here. Only thus could this site provide a greater insight into the character of the prehistoric usage of the White Peak plateau.

IMPLICATIONS

Further consideration of the apparent patterning in the artefact-distribution can bring us back to the stated objective of the 1995 fieldwork, as well as establishing a prerequisite of any future prospects for archaeology on this site. It is not only this patterning, but also the evident lack of disturbance to the topsoil over much of the surviving area, as witnessed by the test-pits, that reinforces an impression formed during our previous work here, viz. that this triangle of ground is worthy of preservation or, failing that, of more extensive investigation. The highly-localized clustering of artefacts deduced above clearly restricts any thought of anticipating which parts might hold information of greater or lesser interest and, hence, which could be sacrificed to the quarry without qualms. For instance, the four pieces of chert recorded in test-pit 7 (Fig. 1) could easily lie at the edge of another cluster equally dense as that represented more obviously by the tally of sixteen in test-pit 15; and other such foci of prehistoric activity could even fall entirely between the test-pits. This is bound to mean that all of the land that has so far evaded despoilment (i.e. to south and west of the pond — Fig. 1) would best be spared damage or destruction, and it can only be hoped that the intended measures to protect what little remains of this site will prove to be effective.

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