LAND AT OTTERHOLE FARM, ST. JOHN'S ROAD, BUXTON, DERBYSHIRE: ARCHAEOLOGICAL INVESTIGATIONS 2003

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SUMMARY

Archaeological investigations of land at Otterhole Farm, St. John's Road, Buxton (centred on NGR SK 04707326), involving trial-trenching, test-pitting and sieving, open area excavation and metal detector survey were carried out during 2003 by Birmingham University Field Archaeology Unit (now Birmingham Archaeology) for John Samuels Archaeological Consultants on behalf of Wilson Connolly Northern, prior to a decision on a application for planning permission for a proposed residential development.

Evidence for human activity during the prehistoric period was recorded in the form of worked flint and chert recovered during the sieving of spoil from test pits. Most of the worked flint or chert appeared to be consistent with a Late Mesolithic date with the exception of a large scraper, of possible Neolithic date. In one field a relatively high concentration of flint/chert was recorded and the test-pitting was then extended to include other parts of the site. Another concentration of flint/chert was identified in the same field as the first concentration. The two concentrations suggested the existence of two potential foci of activity during the Late Mesolithic period. These two areas were hand excavated and sample sieved in order to locate any archaeological features associated with the flint/chert concentrations and to recover a larger assemblage of finds.

No archaeological features were identified, however a regionally important assemblage of worked flint and chert was recovered. The tools comprised of discoidal scrapers, end scrapers, serrated flakes, bladelets, retouched pieces and microliths. The technology appeared to be geared to bladelet production with crested blades, bladelet core trimming flakes and bladelet cores much in evidence. The content of the lithic assemblage suggests the presence of a Late Mesolithic (6500–3500 BC) base or winter camp used by people following a hunter-gatherer way of life.

INTRODUCTION

The site is located within the district of Burbage at Otterhole Farm, St. John's Road, Buxton, Derbyshire (centred on NGR SK 04707326; Fig. 1). The site comprises approximately 4 ha containing six pasture fields (Fields 1–6; Fig. 2), a farmhouse and associated outbuildings. To the north-west of the farmhouse is the Otterhole (Plate 1), a small cave where water resurges from the limestone and feeds a small pond, before

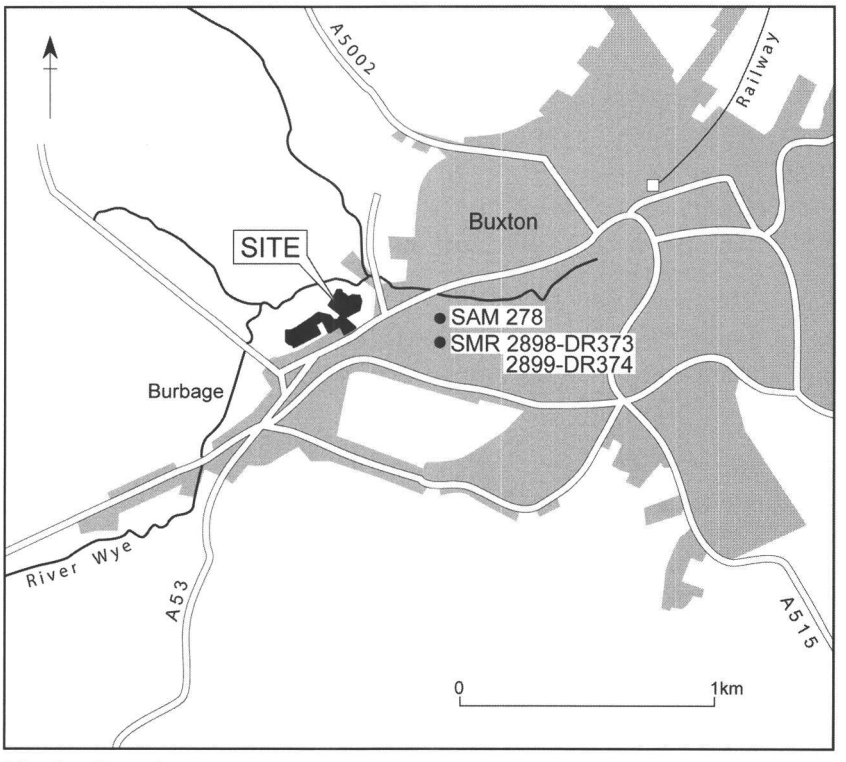

Fig. 1: Location map.

running off into the River Wye beyond the site boundary. A former well, associated with a disused pumping station, is located at the north-east corner of the site, in Field 5. The remains of a former drystone wall bisect the most westerly field (Field 4).

The solid geology is Carboniferous strata of the Monsal Dale Limestone formation (mainly dark lithofacies) at the western part of the site. East of a line running approximately north-east to south-west across the middle of Field 1 the underlying geology is Millstone Grit, overlain by head deposits of stoney clay (Joynes Pike Associates 2002). The site is situated at a height of *c.* 300m AOD.

The aims of the investigations were to locate potential evidence of prehistoric activity (particularly finds of Neolithic and Mesolithic date); to investigate the possible presence of Romano-British activity, (particularly in the form of metal votive deposits around the Otterhole resurgence); to locate evidence of a 17th century mill suggested by documentary evidence; and to ascertain whether possible earthwork features were of archaeological origin.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A previous desk-based assessment (Gifford and Partners 2001) carried out prior to these investigations gives the detailed archaeological and historical background and a summary is provided here.

Plate 1: Otterhole resurgence (Field 3), looking west.

The prehistoric period

No evidence of prehistoric remains is known for the site itself. The earliest and most significant evidence for prehistoric activity in the area has been recorded at Lismore Fields (NGR SK 04957320; SMR No. 2899-DR374 and 2898-DR373; Fig. 1), approximately 250m from the south-east extent of the site. The Lismore Fields site was excavated between 1984 and 1987 and comprised a Late Mesolithic and Early Neolithic settlement. Late Mesolithic activity was characterised by flint-knapping debris in association with a semi-circular gully and an associated pair of postholes interpreted as the remains of a structure. Charcoal was recovered from one of the postholes and a radiocarbon date of 5270 ± 100 BP (OxA 2433) was obtained. Evidence for early Neolithic occupation comprised the remains of timber built longhouses with internal hearths and finds of worked flint and a Grimston style bowl. The majority of this site has now been built over, however archaeological deposits were seen to extend into the field to the north. This field to the north of Lismore Fields has been scheduled by English Heritage (SAM DR 278; Fig. 1). The Lismore Fields site was located near to a spring and a stream at the interface between two types of geology within the Wye valley (Garton 1991), similar to the location of the Otterhole Farm site.

In addition several prehistoric finds including two Neolithic stone axes, a hammerstone and a number of flint flakes have been found in the vicinity of the site.

The Romano-British period

No evidence of Romano-British remains is known for the site itself. The spa town of Buxton is mentioned in the Ravenna Cosmography as *Aquae Arnemetiae.* It is possible that this settlement grew from a Romano-Celtic cult centred on natural hot and cold springs (Hart 1981). The site of a probable Roman baths complex and associated buildings at Buxton is covered by later Georgian development in the town (Myers 2002b). It is possible that the Otterhole resurgence attracted ritual activity and votive offerings in the Romano-British period. Entries in the Derbyshire Sites and Monuments Record suggest the existence of Roman roads converging on the Macclesfield Road and St. John's Road off Green Lane and Lismore Road. There is also evidence of Romano-British occupation at Poole's Cavern.

The medieval period

The only evidence for possible medieval activity within the site is the remains of ridge and furrow within Field 6. The width of the furrows (*c.* 4.5m) and the rounded profile of the ridges may suggest an early medieval date. The county of Derbyshire is mentioned in the *Anglo-Saxon chronicles c.* AD 1049 and the site is located within Burbage or *Burh bece*, Saxon for a stream by a fortified place (Cameron 1959). The area was later part of the Viking Danelaw attested by various local place names. The Domesday Survey does not record the High Peak Hundred, which was later described by the Norman lord William Peveral. Buxton was mentioned in the foundation charter of Lenton Abbey as *buchestanes c.* AD 1108 and was known as Buxton by AD 1577. The district of Burbage became part of the Royal Forest of the Peak during the later medieval period.

The post-medieval period

There is documentary evidence (Kirkham 1968), which suggests that a mill of 17th century date may lie within the site. Its most likely location is close to the river, perhaps in Field 5. There is a documentary reference to underground drainage, possibly at the site, in the early nineteenth century. The precise location of this is uncertain. There is evidence of lime quarrying and burning close to the site from the 17th century. There are numerous references to small-scale lime kilns and coal mining at area of Burbage up until the late 19th century and coal was still being mined for use in kilns into the early 20th century. Small-scale lead mining was also being carried out in the valley of the Wye from the 18th century. This mining activity caused underground flooding and to alleviate this underground drainage networks were created by tunnelling natural subterranean systems.

Earthwork features

A total of 39 possible earthwork features or topographic anomalies were identified during the assessment (Gifford and Partners 2001). These were mainly linear and curvilinear hollows or depressions, mounds and gullies. In some areas especially in Fields 3 and 4, modern rubble has been used to partially backfill some of the earthwork features. A geophysical survey conducted by Joynes Pike and Associates (Joynes Pike and Associates 2002) demonstrated that only 11 of these features were possibly

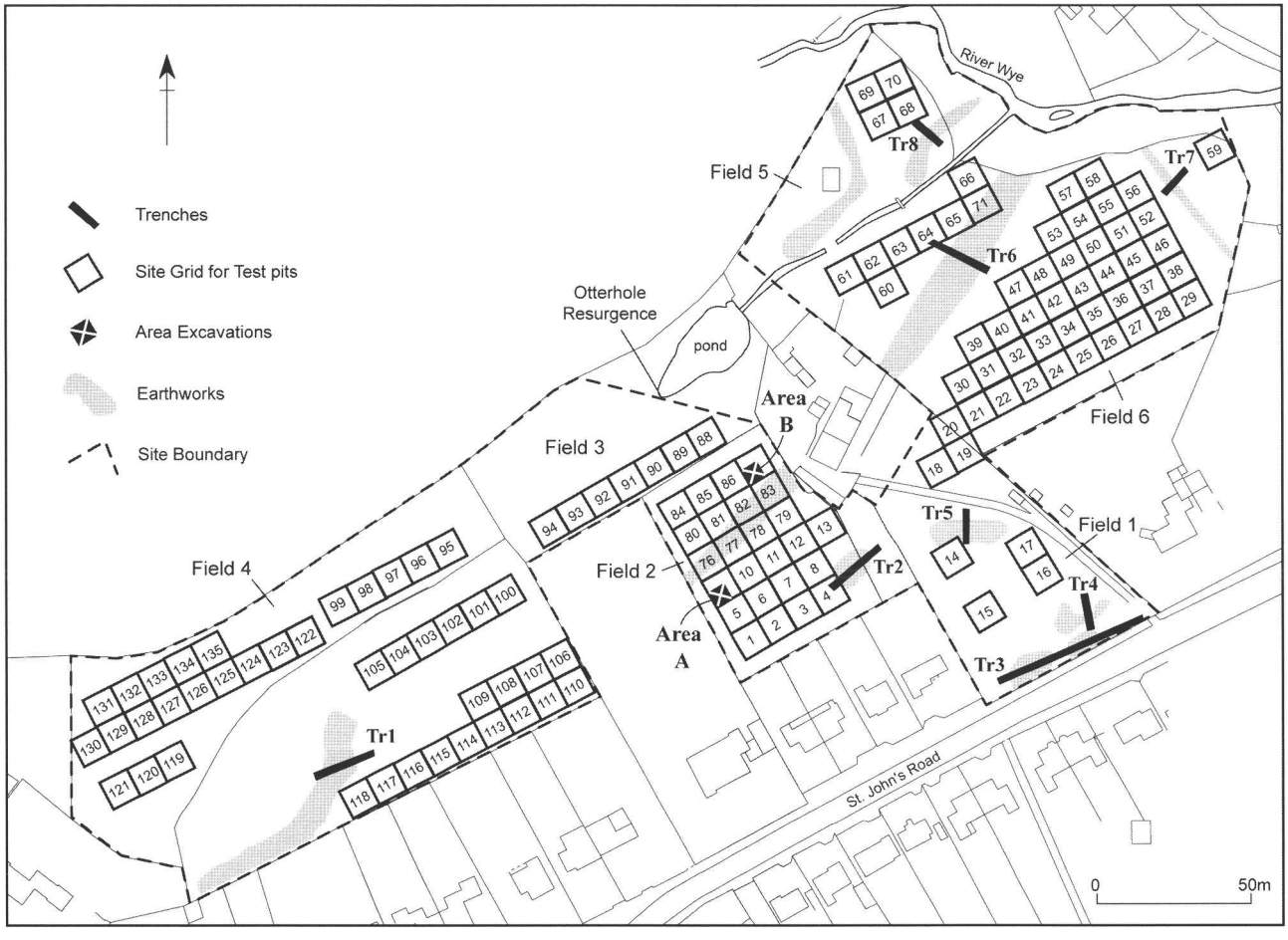

Fig. 2: Location of test pits, trial-trenches and open area excavations.

archaeological. The remaining features are probably the result of hydro-geological phenomena and modern disturbance. An area of ridge and furrow in Field 6, described above as possibly medieval, was also identified.

METHODOLOGY

Phase 1

Test pits

A site grid was established and surveyed in by EDM and 71 test pits were excavated (Fig. 2). The test pits measured 1m × 1m and were excavated in the south-west corner of 10m × 10m grid squares, aligned on the site grid. The excavation was carried out using a mini-digger or JCB fitted with a toothless bucket, monitored by a qualified archaeologist at all times. Topsoil/modern overburden was removed in 0.10m spits, with spit 1 being the first spit, down to the top of the natural subsoil or the top of the uppermost archaeological deposit. The spoil from the test pits was manually sieved through a 0.01m mesh (Plate 2) and all finds were retained, bagged and numbered by test pit and spit. The test pits dug in Phase 1 of the test pitting were numbered 1–71 and the greatest number of pits were located in Fields 5 and 6, as it was thought that areas closer to the river might be conducive to prehistoric activity.

Plate 2: Sieving in progress (Field 5), looking south-west.

Areas of Field 6 were found to have high proportions of clay in the spoil which proved extremely difficult to sieve effectively and the amount of spoil sieved was reduced to 50%. This reduced sieving percentage was only applied to Test Pits 24–71.

Trial-trenching

Eight trial trenches (Trenches 1–8) were excavated (a total of 249m^2 of trenching) across possible earthworks identified by the previous desk-based assessment and thought to be of possible archaeological origin. In consultation with the Development Control Archaeologist for High Peak Borough Council, it was decided that one of the possible earthworks was of modern origin (Gifford and Partners 2001, Feature 26) and this was not trenched. This left 10 possible earthworks, which could be of archaeological origin and all these were examined by means of trial-trenching. A JCB excavator fitted with a toothless bucket was used to remove overburden. Any subsequent cleaning and excavation was by hand. Recording was by means of individual pro-forma record cards supplemented by scale plans and sections, and by colour and monochrome photography.

Metal detector survey

An experienced local metal detectorist, carried out a metal detector survey in Field 3, in and around the Otterhole resurgence and the associated pond to determine whether votive deposits of metalwork were present. Further survey was carried out in Fields 5 and 6.

Phase 2

The results of the Phase 1 test-pitting suggested the original hypothesis, that any potential prehistoric activity at the site may be concentrated close to the river, was incorrect. The concentration of worked flint was situated on higher ground, in Field 2, away from the river.

It was decided to carry out further test-pitting and sieving concentrating on the remainder of Field 2 and the fields to the west. This Phase 2 work was carried out to identify further possible artefact scatters within the site, in areas not originally investigated in Phase 1 because, being further from the river, they were thought to be less conducive to Mesolithic and Neolithic activity.

A further 60 test pits were excavated, located in the northern part of Field 2 (TP 76–87), in Field 3 (TP 88–94) and in Field 4 (TP 95–135) using the methods employed previously and a second flint concentration was located in Field 2. The location of these test pits was designed to avoid most of the depressions and hollows of probable hydro-geological origin in Fields 3 and 4.

Phase 3

The aim of the final phase of work was to mitigate the effect of the proposed development by the excavation and recording of any possible archaeological features associated with artefact scatters and to recover a larger sample of artefacts.

A third phase of test-pitting involved the excavation and sieving by hand of eight further test pits in Field 2 (TP72–75 and TP 136–139; Figs 3 and 4). The methodology was the same as previously, except that all excavation was carried out by hand. The

aim was to define the extent of flint scatters around the two densest concentrations of artefacts (TP 9/10/77, identified in Phase 1, and TP 86/87, identified in Phase 2) and aid the positioning of two area trenches for detailed examination of the flint concentrations.

Open area excavation

Two 5 × 5m areas (Areas A and B; Figs 3 and 4) were excavated to determine whether any archaeological features were associated with the flint concentrations and to recover a larger lithic assemblage. These areas were hand excavated down to the natural subsoil and hand cleaned. Both areas were excavated in 0.10m spits and 25% of spoil from each 1m grid square was sieved manually through a 0.01m mesh. Area A grid squares were numbered 140–164 and Area B grid squares were numbered 166–190. All finds were retained, bagged and numbered by 1m grid square and spit number. Any archaeological features or deposits revealed were to be hand excavated. Recording was by means of individual pro-forma record cards supplemented by scale plans and sections, and by colour and monochrome photography.

RESULTS

Phase 1

Test pits (Fig. 2)

The first phase of fieldwork involved excavation of 71 one metre square test pits (TP's) located in Field 1 (TP 14–20), Field 2 (TP 1–13), Field 5 (TP 67–70) and Field 6 (TP 21–66 and 71) and designed to locate evidence of prehistoric activity, but in effect provided an opportunity to sample potential archaeology of all periods. The greatest numbers of pits were located in Fields 5 and 6, as it was thought that areas closer to the river might be conducive to prehistoric activity.

The natural subsoil was generally a yellow brown sandy clay, with outcrops of limestone in Field 3. Evidence of a possible pond or perhaps a paleochannel was recorded in TP 35 and TP 36, Field 6. The base of this feature was not reached, but it was at least 1.70m deep, and was filled with layers of grey silty clay and black silty clay. The amounts of flint and chert recovered was generally low with the topsoil in the majority of test pits containing no flint and only one or two test pits containing three or fewer flints. However, in Field 2, several test pits contained three or more flints and two adjacent pits (TP 9 and TP10) contained 16 and 6 pieces of flint, most of it worked, of probable Late Mesolithic date. This concentration of flint suggested a focus of activity during the Late Mesolithic period. The other finds recovered were mainly of post-medieval date with the exception of one sherd of medieval pottery from the topsoil, TP 47 (Field 6). Three archaeological features were recorded in two test pits in Field 6: a probable post-medieval drystone wall within a linear cut (F2 and F5, TP 30) and two possible plough furrows (F3 and F4, TP25), possibly related to the ridge and furrow in this field. The height difference between top of ridge and base of furrow was 0.20–0.30m. It was aligned north-east to south-west, with ridges spaced at 4.5m and a greyish brown silty clay subsoil layer containing post-medieval pottery was recorded, filling the furrows in Field 6.

Trial-trenching (Fig. 2)

Eight trial-trenches were excavated across possible earthworks. Most were found to be either natural undulations, the result of probable subterranean collapses, or modern dumping and one was a probable modern drainage feature. Two of the trenches (Trenches 6 and 8) investigated depressions, which are probably paleochannels of unknown date. The probable paleochannel in Trench 8 contained what appeared to be an organic peat-like deposit, which was sampled and was found subsequently to contain no macro-plant remains. No other significant archaeological features or deposits were recorded.

Metal detector survey

Initially, the metal detector survey was carried out in and around the area of the Otterhole resurgence and within the associated pond. The pond appears to be a fairly recent feature, as it does not appear on early OS maps depicted in the hydro-geological assessment report (Joynes Pike Associates 2002). The only finds recovered were of a modern date. The rapid completion of the metal detector survey around the Otterhole resurgence allowed further metal detecting to be carried out in Fields 5 and 6. Here also, the only finds recovered were of a modern date and were not retained. A metal detectorist, Mr Wilkinson, who had previously investigated the site was contacted. The results of his work were the recovery of a 16th century beehive thimble, lead musket balls and seals and no finds of medieval or earlier date (*pers. comm.* Simon Mortimer) were recovered.

Phase 2

Test pits (Fig. 2)

The programme of test-pitting and sieving was extended into the northern part of Field 2 (TP 76–87), Field 3 (TP 88–94) and Field 4 (TP 95–135).

In Fields 3 and 4 the quantity of flint recovered was low and the test pits contained less than three flints per test pit. In Field 2 further evidence of a concentration around TP 9/10 was found, with the adjacent TP 77 yielding seven flints. In the northern part of Field 2 two adjacent test pits (TP 86 and TP 87) contained five and twelve flints, the majority worked, and of probable Late Mesolithic date. This concentration of flint suggested a second focus of activity during the Late Mesolithic period. Two test pits (TP 82 and 83) dug in Field 2 at the base of a linear surface depression in Field 2, aligned north-east to south-west, exposed a possible former paleochannel, possibly a continuation of the paleochannel investigated in Trench 6 during the Phase 1 trial-trenching.

Phase 3

Test pits

Eight further test pits (four around each scatter) were excavated in Field 2 to define the extent of the flint scatters around TP 9/10/77 and TP 86/87 prior to area excavation.

Three test pits (TP 72–74) were located 5m to the south, east and north of TP 9. The presence of a field boundary and an associated mature tree meant a fourth test pit

could not be dug to the west, so a further test pit (TP 75) was excavated to the north of the east pit (TP 73). The quantities and distribution of flint recovered suggested the optimum area for excavation would be to the north-east of TP 9. Three pits (TP 137–139) were excavated and sieved 5m to the west, north and east of TP 87. A fourth test pit (TP 136) was excavated 5m to the north of the west pit (TP 137). The quantities and distribution of flint recovered suggested the optimum area for excavation would be to the north-west of TP 87.

Open area excavation

Two 5 × 5m areas (Areas A and B) were excavated.

Area A (Fig. 3; Plates 3 and 4)

The natural subsoil was a yellow sandy clay (9001). Two features (F900 and F901) were recorded. A grey silty deposit (9002) overlying 9001, within an irregular shallow scoop (F900), 3m × 1.75m and 0.1m deep, was revealed and sample excavated (all spoil was sieved and no finds were recovered). This was found to be of natural origin, probably due to root action. A greyish brown silty sandy clay (9003), within an irregular sub-circular feature (F901) approximately 0.5m in diameter and 0.2m deep, was also revealed and proved to be of natural origin. Sealing natural 9001 was a layer of topsoil (9000), 0.37m in depth.

An assemblage of 51 flints was recovered from Area A, excluding those recovered in the vicinity during Phase 1–3 of the test-pitting programme and 36 of these flints were humanly worked. Fourteen tools were identified from Area A, these comprised four scrapers, four cores and six blades including a possible serrated bladelet. Thirteen pieces of black chert were also recovered. No archaeological features were recorded.

Area B (Fig. 4)

The natural yellowish brown sandy clay (10002) was overlain by 0.35m of topsoil (10000). An assemblage of 188 flints was recovered from Area B, excluding those recovered during Phase 2–3 of the test-pitting programme and 137 of these flints had been humanly worked. A total of 61 tools was identified from Area B, comprising: four scrapers, one possible scraper, nine cores, three serrated flakes, and 43 blades including one retouched bladelet and four serrated bladelets. Eleven pieces of black chert were also recovered. No archaeological features were recorded.

THE FINDS

Flint and chert

By Dr Lawrence Barfield

The total lithic assemblage comprises approximately 296 worked items of flint and chert collected during test-pitting and a further 120 unworked items. The assemblage appears to be homogeneous and can be attributed to the later Mesolithic period. Only one piece, a scraper, may be of a later date.

Raw materials and technology

The raw materials represent a wide range of flint and chert which are difficult to classify precisely without more detailed study. However it is possible, provisionally, to

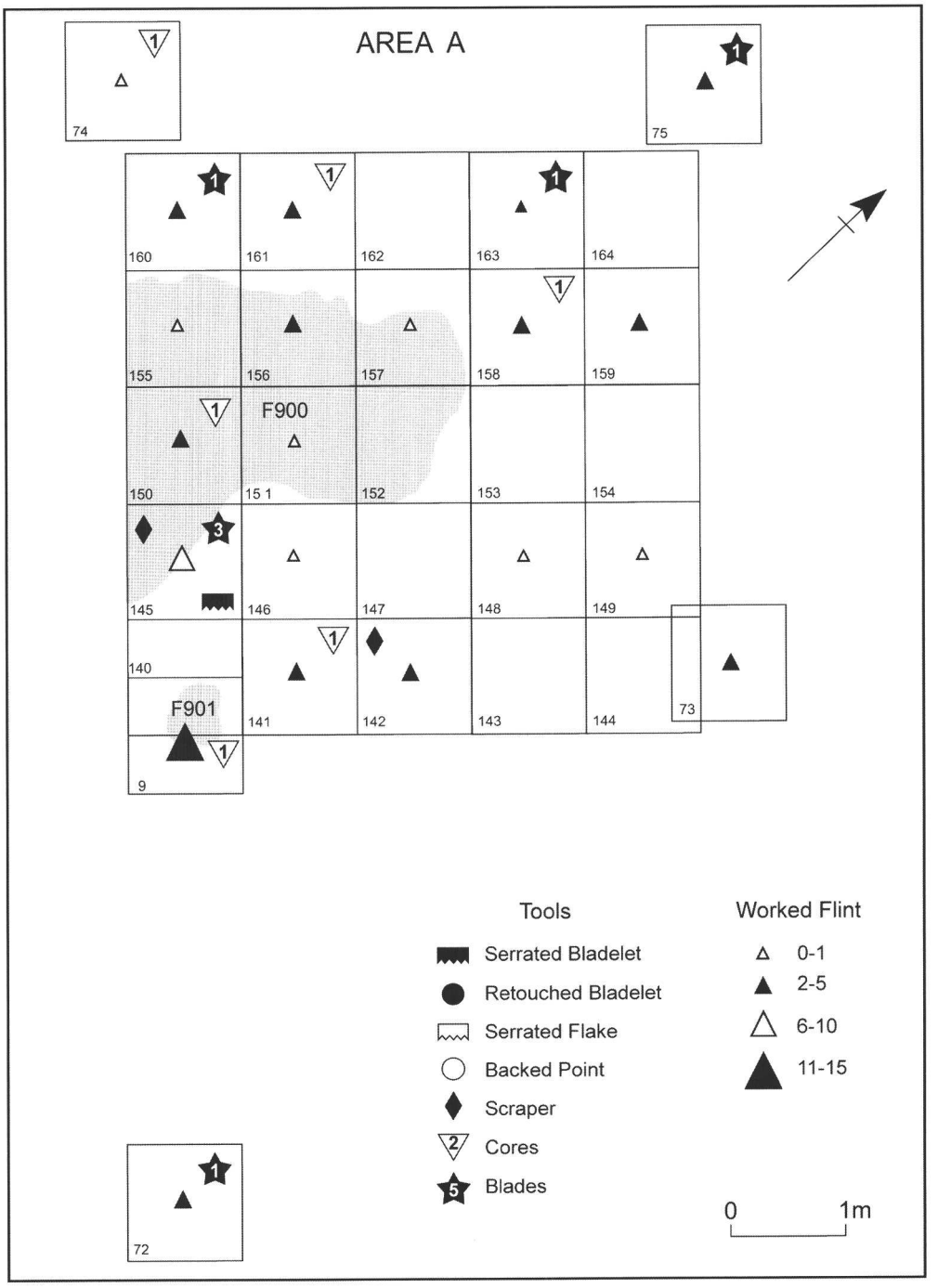

Fig. 3: Distribution of worked flint and tools Area A.

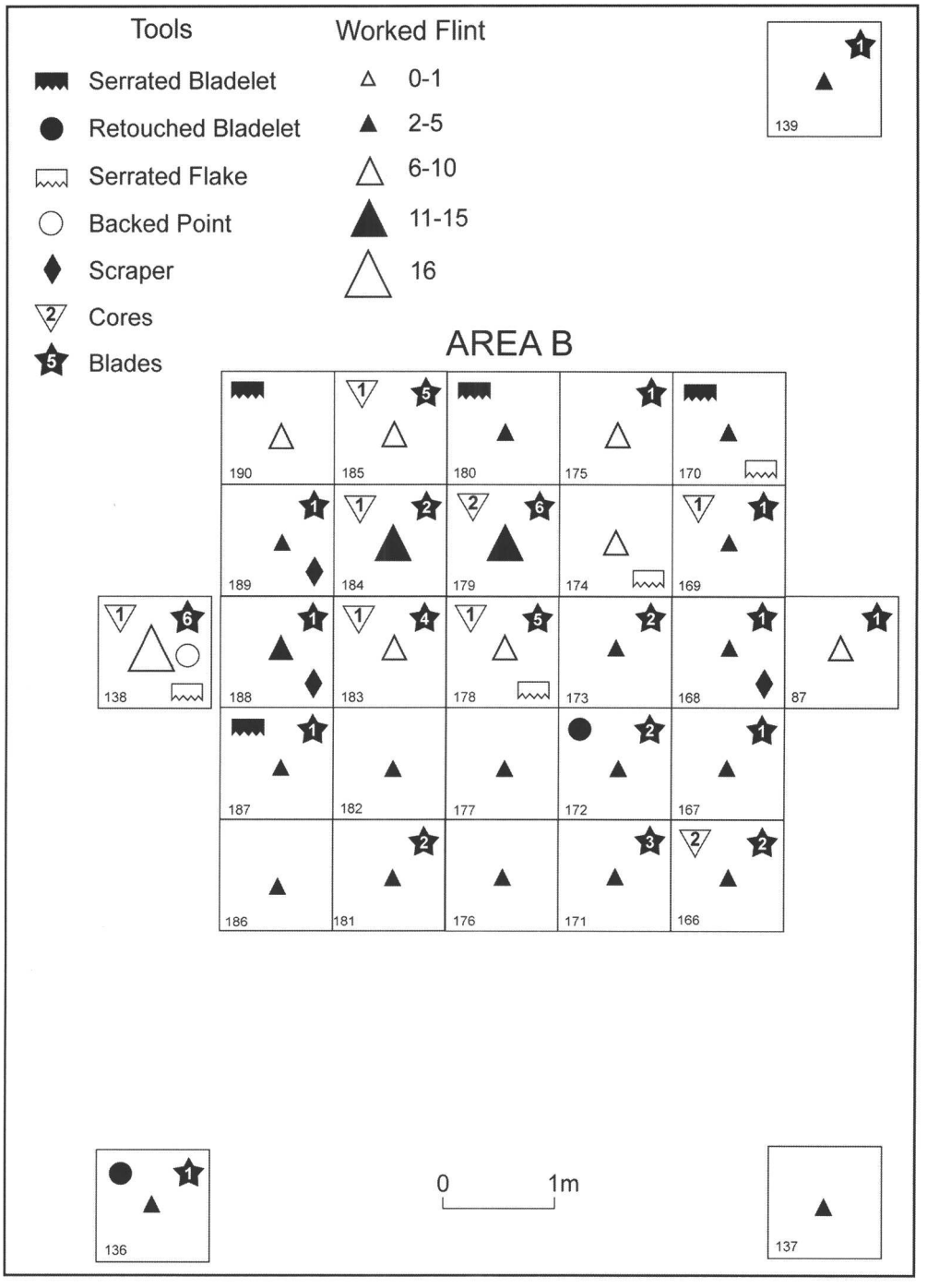

Fig. 4: Distribution of worked flint and tools Area B.

Plate 3: Excavation in progress Area A (Field 2), looking east.

recognise several varieties. Flint from secondary geological sources predominates. This is mainly grey-brown in colour; other varieties include a good quality orange-brown as well as white and mottled grey. A hard 'quartzy' white flint with irregular inclusions is distinctive and comparable with a variety noted on Mesolithic sites in the west midlands. The most recognisable chert is black (or sometimes grey in the cortex area) comprising 49 pieces (12% of the total assemblage), 37 of which were worked (12.5% of the worked assemblage), in this assemblage. Other chert is white or off-white. Two scrapers have been made of a very coarse quartz material. There are some fragments of unworked angular rock in the assemblage which had edges sharp enough to be utilised, even though there was no evidence for this.

Technology is geared to bladelet production with crested blades, bladelet core trimming flakes and bladelet cores are much in evidence (Figs 3 and 4). There are eighteen cores or broken cores, seven of these are single platform cores (mostly conical), five are opposed platform cores and four are rotated globular cores. The final products are dominated by bladelets. Two pieces have been worked using the anvil (bipolar) technique (6/1, Field 2 and 9/3, Area A; Field 2). Two pieces are on thermal flakes, one of these is a core; the other (168/2, Area B), a scraper, may be Neolithic.

Artefacts

The microliths comprise a fragmentary bladelet with a small amount of retouch (172/3, Area B) and an atypical obliquely backed point (138/1, Area B). The scrapers are

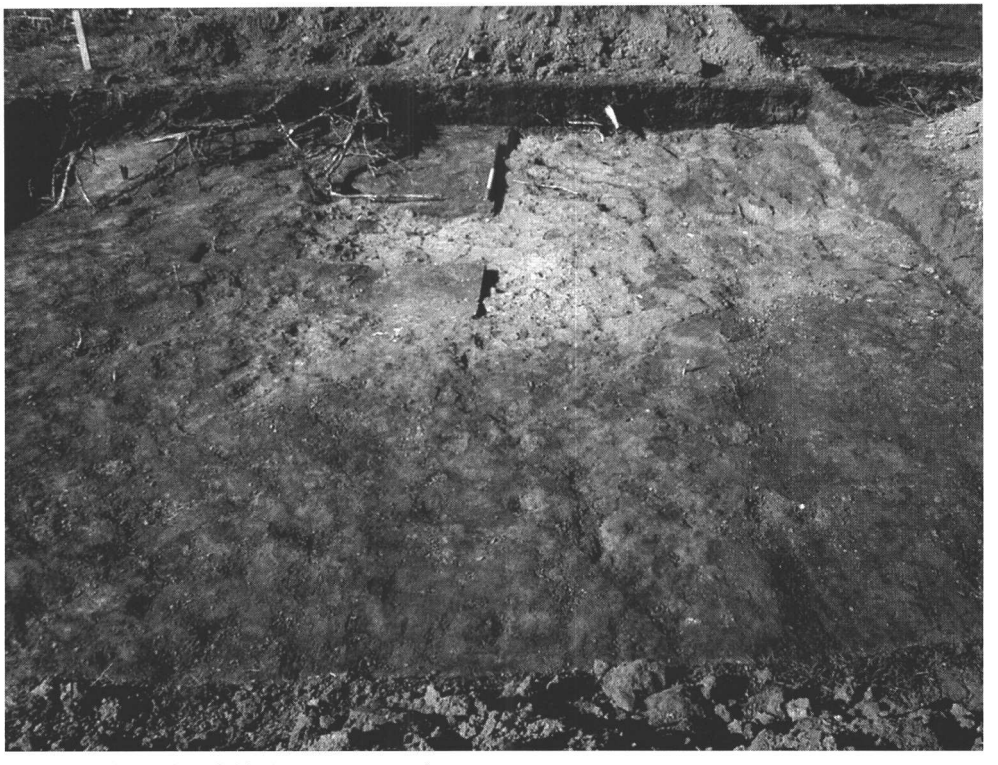

Plate 4: Area A (Field 2), post-excavation.

mostly small and discoidal, two can be classified as thumbnail scrapers. Two discoidal scrapers are on a very coarse quartzy material. One on a thermal flake may not be Mesolithic. One end-scraper may be a truncated blade rather than a scraper. The serrated pieces are on both bladelets and flakes; some have exceptionally fine, mostly regular, serration. Most of the different raw materials are used in blade production. There are seven burnt pieces. A further study of the relationship between raw material and tool/blade typology might be rewarding.

Discussion

The flint/chert assemblage points to intense use of the area in Mesolithic times and the site could be a continuation of the distribution of Mesolithic material excavated previously at the adjacent site of Lismore Fields (Garton 1991). The absence of convincing microliths and the relatively higher number of scrapers, as well as manufacturing debris might suggest we are dealing with a base or winter camp in the traditional sense of classifying sites as either hunting and base camps. A more valid statistical sample would be needed to confirm this.

The dating of the assemblage is to the later Mesolithic period when a greater use of varied local cherts and other rocks were in use (Myers 2002a). The absence of microliths, and the absence of a full publication of the adjacent sites, makes further comparisons difficult (Garton 1991). The assemblage, however, both from the point of view of technology (core types) and typology, does appear to be substantially different

from Mesolithic sites in the west midlands to the south. The only piece which may be of a later date, is a large discoidal scraper on a thermal flake. This requires further confirmation. A more in depth evaluation of the flint and chert can only be made when both the Neolithic and Mesolithic flint from nearby Lismore Fields has been published.

Other finds

By Annette Hancocks

One box of finds was recovered from the test pits and open area excavations. The assemblage largely comprised of tile (28 fragments), pottery (537 sherds), glass (238 fragments) and iron items (28). All the finds were post-medieval in date, with the exception of a single sherd of medieval pottery from TP 47, and probably mainly represent manuring scatters and dumping of rubbish within natural depressions.

Plant remains

By Dr Marina Ciaraldi

A single soil sample was collected from the lower fill (8008), of an undated probable paleochannel feature F800 in Trench 8. Context 8008 appeared to be a possible waterlogged context with the potential for the preservation of organic remains. The sample was assessed in order to establish whether biological remains were preserved and, if so, whether they were suitable for radiocarbon dating.

The soil sample consisted of a black, silty clay. A sub-sample of 100 ml. was sieved through a 0.3mm mesh sieve and the material recovered was scanned under a standard stereomicroscope. The material recovered on the sieve was scarce and consisted exclusively of manganese concretions and very small fragments of coal.

The results of the scanning indicated that organic macro-remains were not preserved in the sample. The only way to obtain a radiocarbon date would have been to submit the sediment itself, however this option would be unfeasible due to the presence of coal in the sample. However, given the lack of organic macro-remains and on the basis of the results described above, no further analysis was recommended.

DISCUSSION

The earliest evidence for activity on the site was in the form of the flint and chert assemblage recovered during test-pitting and open area excavation. With the exception of one scraper all of the flint and chert was probably humanly worked in the Late Mesolithic period (6500–3500 BC). The assemblage is of regional importance, contributing to an increasing amount of data which is expanding our knowledge about the density and nature of human activity in the region, at this time.

The worked flint/chert appears to be mainly concentrated at the western part of the site, which is situated on the drier underlying limestone geology (Fields 1, 2 and 4), away from the wetter, lower-lying and poorly drained part of the site, near the river (Fields 5 and 6). The amounts of flint/chert recovered was generally low across most of the site with no flint/chert being recovered from the majority of test pits and three or less flint/chert pieces being recovered from just a few test pits. The only part of the site with relatively high quantities of flint and chert is Field 2.

The evidence for Late Mesolithic activity appeared to be focused on two discrete areas (Area A and Area B) in Field 2 where much higher quantities of flint and chert were recovered suggesting relatively intensive use in the Mesolithic period. These two flint concentrations are separated by a linear depression, which is possibly a paleochannel and may be part of the undated paleochannel recorded in Trench 6; Field 6 (Fig. 2). The present farmhouse may be built on the filled-in course of this paleochannel. It is even possible that the two apparent concentrations of flint were once part of the same scatter and that the possible paleochannel came into existence during a later period, but since the paleochannel is undated this is speculative.

The content of the lithic assemblage could suggest the former presence of a base or winter camp in the vicinity, in the traditional sense of classifying sites as either hunting and base camps. This interpretation is based on the scarcity of convincing microliths and the relatively higher number of scrapers, as well as manufacturing debris. This would place the site in the 'scraper dominated' category as defined by Mellars (1976). The presence of relatively large quantities of scrapers within an assemblage is often seen as indicative of domestic activities carried out at base camps, as opposed to microlith (interpreted as barbs for projectiles) dominated assemblages, often found on sites over 350m AOD and frequently interpreted as evidence of hunting camps. However, reliance on a simple microlith: scraper ratio, as a means of classifying sites is often problematic (Spikins 1999, 69) and the quantities of both these tool types are fairly low.

The evidence from the site at Otterhole suggests that around 6500–3500 BC the site was used by a group of Late Mesolithic hunter-gatherers. The assemblage of humanly worked stone would appear to indicate maintenance activities were carried out at the site. The raw materials represent a wide variety of flint and chert from several sources. People would probably be processing raw materials, plant and animal products. Animal skins would be prepared for clothing manufacture and other uses and meat butchered and eaten here.

Other activities commonly carried out near the site may have been antler, bone and woodworking, clothing repair, stone tool manufacture and repair. Specialised task groups would have made trips to hunt game and fish. Recent scientific analysis of human skeletal material may suggest that the majority of dietary protein was derived from animal sources (Myers 2002a, 19–20). Also people would have been ranging across the landscape to forage for fruits, nuts and vegetables while others would have beencollecting raw materials including flint and chert to be worked into tools.

No evidence of structures or any archaeological features associated with the flint concentrations were recorded. This may suggest any such structures were beyond the site or perhaps they have left little or no trace on the ground. In Area A, the flint tended to be concentrated in the western part, whereas in Area B there appeared to be no clear variation in concentration. In both Areas A and B flint/chert tended to be found in the lower part of the topsoil.

Factors which often influence the location of Mesolithic settlement may include the proximity of a water source, as at Otterhole and Lismore Fields, or a prominent location within the landscape, as at Unstone. Work at Unstone, situated above the River Drone, revealed a concentration of four thousand flints, which came mainly from

an area of 120m^2, together with possible Mesolithic features. Here the assemblage appears to correspond with Mellars 'balanced' classification (Myers 2002a). An important lithic assemblage, mainly of Late Mesolithic date, was recently excavated at Lordsmill Street, Chesterfield (Foundations Archaeology 1999) on a low headland situated on the Derbyshire Coal Measures. This assemblage came from several features, which were possibly tree throws and contained a high proportion of chert. Amongst the assemblage were five scrapers, a microlith, an awl, cores, core rejuvenation material, blades and flakes. The geology at Otterhole appears to have influenced the location of the site. However, it is becoming increasingly apparent that Mesolithic activity can be found on all types of geology in Derbyshire (Hart 1981; Myers 2002a).

The quantities of flint/chert per square metre, which were recovered from the site, appear to be substantially less than at Lismore Fields. Here the area around the Mesolithic structure appears to have yielded between 11–49 worked flints per metre square with one square yielding 50+ flints (based on an unpublished provisional distribution plot supplied by D. Garton). However, it is not yet clear how much of this flint is Late Mesolithic. There are only three squares in Area B which produced 11–16 worked flints and in Area A the initial Phase 1, TP 9, produced 13 worked flints with all other squares producing much less flint than in Area B, and only one square producing in the region of 6–10 flints. Even taking into account possible bias in recovery methods between Lismore Fields and this site there appear to be smaller quantities of flint at Otterhole. Further study of the important assemblage from Otterhole is needed, when studies of both the Mesolithic and Neolithic flint from nearby Lismore Fields have been published.

Apart from the ridge and furrow in Field 6 all other fields showed no evidence of ploughing. With the exception of the probable post-medieval wall (F2, TP30), the linear gully (F300, Trench 3), and the evidence for plough-furrows (TP 25, Field 6), all other excavated features proved to be of probable natural or recent origin. The hollows depressions and mounds within the site were probably either former paleochannels, the result of subterranean collapse, natural undulations in the landscape or the result of recent dumping. The metal detector survey found no evidence of the area around the Otterhole resurgence being used for deposition of votive metalwork and only recovered finds of recent date.

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