

## **A Mesolithic and Early Bronze Age flint site in the Weald: fieldwork and excavation at Brinsbury, Pulborough.**

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### **Summary**

*Surface collection and excavation of trenches within a field at Brinsbury Campus of Chichester College, north of Pulborough, recovered flintwork relating to prehistoric activity predominantly of two periods – Mesolithic and the Chalcolithic/Early Bronze Age. The latter finds, in particular, which incorporate a large number of barbed-and-tanged arrowheads and several broken flint daggers, are of special interest, being found within a small area that hints at unusual activity. Excavation provided evidence of few features, merely several burnt areas and some stake holes and it is considered that the land surface may have been truncated by cultivation enhanced erosion. A small amount of Romano-British material may attest to roadside settlement nearby.*

### **Introduction**

This paper reports on a programme of fieldwalking and excavation carried out by the Worthing Archaeological Society and the Brinsbury Campus of Chichester College between 2008 and 2012 that resulted in the recovery of struck flint attributable to at least two periods of activity. The earliest of these, a scatter of Mesolithic flintwork, hints at activities taking place probably intermittently over a considerable period of time. The second, a quite unique accumulation of 90 barbed-and-tanged arrowheads along with flint dagger fragments can be attributed to the Chalcolithic/Early Bronze Age. Other pieces, particularly the more irregular examples, may be of later date. A thin scatter of Romano-British material was also recovered.

### **Site Location & Geology**

The site is located at Brinsbury Campus (University of Chichester), centred on NGR TQ064226 in the parish of Pulborough, West Sussex, some 2.5km north of Pulborough itself and 3km south of Billingshurst (Fig.1). It occupies land immediately to the west of the A29, formerly part of the Brinsbury Estate. The fields that comprise the site, known as North-east Park and South-east Park respectively, are set either side of a track at the northern edge of the campus and between them cover an area of 12.26 hectares. They are located on the southern flank of a low ridge with small west to east flowing streams, tributaries of the River Arun, situated to both north and south. The ridge is interrupted by a shallow bowl-shaped depression some 240m in diameter with a shallow valley extending from it to the stream course in the south (Figs 2 and 3). This may be the result of post-glacial solifluction although here the catalyst for such an occurrence is unclear.

The site is situated on Wealden Beds, but may once have been surmounted by other lithologies and it might be expected that much covering material, including a significant carpet of up to 0.5m of loess (Jefferson *et al* 2003), has washed down to the stream valley leaving soils and prehistoric land surfaces truncated. It has certainly been subject to a long period of arable farming despite the heavy clay soils and the insertion of extensive field drains, subsoil agitation and the addition of large amounts of coarser material (flint, building rubble etc., in an attempt to improve the soil quality). This has resulted in a largely undifferentiated soil profile lying immediately above the Wealden Clay, but with the added problems of potentially intrusive additions.

## **Background**

Following deep disturbance with an 'agitator', a machine consisting of long (45cm) prongs that is dragged through the soil to break it up at depth, casual fieldwalking by students of the College led by Mr Paul Foskett (lecturer in Countryside Management) recovered an extensive collection of flint artefacts, notably including 28 barbed-and-tanged arrowheads. This was duly reported to County Archaeologist, Mr John Mills, who asked Worthing Archaeological Society (WAS) to inspect the area.

As a result, a joint project was established between Chichester College and WAS to investigate the site, the first phase of which took place in October 2008 when a resistivity survey was carried out over a small part of North-east Park Field. Unfortunately, the nature of the soil conditions meant that little was revealed about the site. Subsequently, in December of that year, two small, 3m x 1m, trenches (Trenches A and B) were excavated by college students (under WAS supervision). These revealed about 35cm depth of soil above a mottled orange clay which appeared to represent the underlying Weald Clay.

An opportunity to collect from the surface of North-east Park Field occurred in 2010 and this was jointly carried out by college students along with members of four local archaeological societies, the Worthing Archaeological Society, Horsham District Archaeological Society, Chichester District Archaeological Society and Brighton and Hove Archaeological Society. Two further seasons of work followed in 2011 and 2012 when five trenches were excavated in North-east Park.

## **Fieldwalking**

A grid of 20m<sup>2</sup> squares was laid out and a total finds collection policy established. Flint tools and any prehistoric pottery were targeted as 'small finds', three-dimensionally recorded and recovered and all other finds were collected and bagged for each grid

square. The artefacts recovered were then sorted, cleaned, marked and recorded, again by college students under the supervision of WAS members.

There was a general cover of 'background noise' across the site, only rarely did a grid square produce nil results. It can be seen from Fig 4 that the greatest density of material occurred around the northern slope of the 'bowl'. Material recorded in the field as Mesolithic or Early Neolithic i.e. blade-like is shown in Fig 5 and later material in Fig 6. In both cases there was a focus on the north-west edge of the 'bowl', the Chalcolithic or Early Bronze Age distribution being more widespread across it.

### **Evaluation Trenches**

In all seven trenches were placed to investigate the scatters. For recording purposes these were aggregated into 5m lengths. Worked flint with a maximum measurement over 5mm and other artefacts recovered were treated as Small Finds and three-dimensionally recorded, while flint under 5mm found within the trench was collected and bagged for each 5 metre length of the trench.

#### **Trench A**

A trench 3 x 1m was excavated by hand to investigate the area where recovery of struck flint from the surface was most numerous. A 35cm thick, undifferentiated plough soil layer sat directly upon the natural Wealden Clays. The latter had been cut into by a water pipe trench. No finds were associated with these features, but five flint artefacts were recovered from the plough soil layer.

#### **Trench B**

Also excavated by hand, a 3 x 1m trench was positioned to investigate an apparent boundary seen in the resistivity survey (see site archive). This appeared as a very distinct line running NNE-SSW at the base the western slope of the bowl, but the trench encountered no evidence of cultural activity and the feature may have been geological, or possibly an artefact of the data processing. Here, the undifferentiated plough soil reached a maximum depth of 25cm and yielded three flint artefacts. The underlying clay was excavated to a depth of 1.05m at its northern end, and was undisturbed.

#### **Trench C**

Measuring 100m in length and 2m wide, this trench was oriented north-east to south-west across the north-western corner of the 'bowl' at a point where the density of flint

recovered during fieldwalking was at its greatest (Fig 8). The upper 15 cm was removed by machine, with 10% sieved after removal. The trench was then excavated by hand to the base of the plough soil. A number of flint artefacts, 220, were recovered, as well as 14 sherds of historic period pottery and small quantities of fire cracked flint, glass, foreign stone and CBM.

Three burnt areas were located, one situated 48m from the southern limit of the trench (Feature 505-plan and section drawing in site archive) being fully excavated. This consisted of a sub-circular depression, with a maximum diameter of 72cm west-east, and a maximum depth of 4cm, with the natural clay surface baked at the base. The fill of the feature was a reddish brown, fine grained, silty material, with finely disseminated charcoal along with a scattering of larger (up to 5mm maximum diameter) pieces. Above this was mottled grey-orange clay with evidence of burning (Layer 017) and this was sealed by a layer of light orange brown clay free of inclusions (Layer 011). Associated with the upper levels of the feature (Layer 017) were many small flakes and chips of flint, with a possible barb from an arrowhead being recovered from its margin.

Two similar burnt areas were recorded within the trench, both partially within the baulk, features 508 and 510 (illustrations in site archive). Three of the burnt areas form an alignment in the trench, feature 510 being c.8.5m north of 505, feature 508 c.17m south. Careful re-examination of the area between features 505 and 508 revealed the possibility of another burnt area (in the form of small fragments of burnt clay and charcoal) which occupied the centre of the trench. This occurred c.8m from 505 and c.9m from 508, where a disrupted 'skim' of burnt clay and charcoal fragments was observed.

The function of these features is unclear. They may form discrete features, perhaps hearths, but the shallow depression of Feature 505 had an irregular base and it is entirely possible that it comprised a natural depression or tree bole that acted as a sediment trap, the old ground surface being truncated. If this were so the three (possibly four) features may form remnants of a once wider occupation surface.

Two lateral extensions were cut from Trench C, but these uncovered nothing of archaeological interest.

## **Trench D**

Measuring 50m x 2m, this trench was placed across the south-eastern slope of the 'bowl'. No features of interest were found.

## **Trenches E & F**

These 3m x 3m trenches were dug adjacent to Trench C, their purpose being to try to establish if the alignment of burnt features seen in Trench C continued. No features were observed.

## **Trench G**

This 50m x 2m trench was excavated along the north-eastern crest of the 'bowl'. Four small irregularly shaped oval features were noted, all being similar. The maximum diameter was 24cm, reaching a depth of 6cm into the Wealden Clay, and filled with fine, reddish brown silty clay with charcoal finely disseminated throughout. They formed a rough alignment parallel to the crest of the ridge.

## **Finds from excavation**

### ***Pottery***

#### *Prehistoric* by David Lea

A single sherd of prehistoric pottery was recovered from the spoil heap of Trench C, section 10-15m from its southern extreme (Fig 9). The item is impressed ware, measuring 32mm by 28mm by 6mm thick and weighing 5 grams. The fabric is of type F1, well fired but with a soft exterior surface. The matrix is sandy, with the interior surface quite granular, although the exterior is smooth and soapy. The piece is tempered with angular poorly sorted calcined flint fragments up to 2mm in length.

The decoration consists of two horizontal bands of vertical impressions 6mm in length with 2mm separating each incision. The two bands of impressions are 5mm apart and separated by two bands of near continuous horizontal impressions. The sherd is identified as a form similar to examples recovered from excavations at Mile Oak, Itford Hill and Black Patch, Alciston, Sussex (Seager Thomas 2008, 16, 36 and pers. com.) and assigned to the Deverel-Rimbury style which places it c1700-1150 (Cal. BC). The decoration is unusual for a Deverel-Rimbury pot, but noteworthy that its nearest comparator from Itford Hill was recovered from a barrow. Similar decoration also occurs on sherds of a globular urn from a probable field boundary at Hengrove Farm, Staines (Poulton *et al* 2007, 195 fig 4.2.3 no 71)

#### *Later Pottery* by Gordon Hayden

Most of the later pottery from excavation and fieldwalking (Table 1) is datable to the Roman period. The impression is one of deposition of discarded pottery during a period from the 2nd century AD continuing to the mid-4th century AD, and bears some

resemblance to that recovered from Slindon (Hayden 2011) and Blacksmith's Corner (Hayden 2014).

For this assessment a pocket microscope at X60 magnification incorporating a built-in artificial illumination source was used to ascertain the nature of inclusions. Of most note are three sherds of Pulborough Samian (Tomber & Dore 1998: 186; fabric code: PUL SA). These appear to emanate from three different vessels and are likely to date to the first half of the 2nd century AD. Amongst the rest of the assemblage are a few sherds of Rowland's Castle coarseware, including a number of rims which can be paralleled at Fishbourne (Cunliffe 1971). The major period of production of this fabric dates from the mid-1st century to the end of the 3rd century AD (Dicks 2009: 55 & 65; fabric code: A). Also recognised were fineware sherds of Central Gaulish Samian (Tomber & Dore 1998: 30; fabric code LMV SA) and New Forest Colour-Coated (Tomber & Dore 1998: 141; fabric code NFO CC) wares, and a few very degraded sherds of Alice Holt/Farnham (Tomber & Dore 1998: 138; fabric code ALH RE) and Dorset Black-Burnished Ware 1 (Tomber & Dore 1998: 127; fabric code: DOR BB 1).

**Table 1:** *The pottery from Brinsbury College 2010-2011*

<i>Excavated</i>				
Context	SF	Qty	Wgt	Description
2	460	1	3	Local copy of Oxfordshire Red-Slipped Ware
2	356	1	4	Rowland's Castle jar Fishbourne type 313
2		1	36	Pulborough Samian Curle 11 bowl flange
2		1	5	Pulborough Samian Drag. 37 decorated bowl body
2		1	1	Post-Medieval ceramic (?land drain)
<i>Fieldwalking</i>				
Context	SF	Qty	Wgt	Description
B5		1	4	Rowland's Castle body
B7		1	1	Pulborough Samian Drag. 30 bowl lower body protrusion
C3		1	2	Degraded Les Martres-de-Veyre (Central Gaul) Samian
C4		1	7	New Forest (Metallic) Colour-Coated beaker
C4		1	7	Alice Holt/Farnham coarseware
D4		1	30	Very degraded Alice Holt/Farnham coarseware or a micaceous sandstone
E4		1	3	Degraded Alice Holt/Farnham coarseware (BB1 copy)
E5	203	1	5	South Dorset Black-Burnished 1 (BB1)
E6		1	4	Local copy of Oxfordshire Red-Slipped Ware
F8		1	52	Miscellaneous White Ware flagon body
F9		1	8	Rowland's Castle jar Fishbourne type 313

G7		1	14	Degraded Rowland's Castle bowl Fishbourne type 209
G8		1	5	Rowland's Castle jar Fishbourne type 161
K10		1	9	Very degraded Dorset BB1 or a shale object
Total	19			

*Other material* (see site archive)

### *Flint*

Some 270 pieces of flint were recovered from excavated contexts (see Tables) and the generally low count indicates that collection from the surface was reasonably comprehensive and representative of the assemblage as a whole. Of this, the greater amount came from Trench C where the whole range of struck material including for barbed-and-tanged arrowheads was present. Insufficient quantities from any particular context make numerical analysis meaningless, but taking the simple expedient of assuming blades and blade fragments representative of Mesolithic and flakes and arrowheads Neolithic activity, then Trench A encountered Mesolithic material; Trench B Neolithic; while Trench C, with 79 Mesolithic pieces and 66 Late Neolithic/Early Bronze Age-like pieces appears to be the focus of activity for both periods; Trench D Neolithic; E narrowly Neolithic; Trenches F and G similar quantities of each period. In no trench is there a preponderance of debitage that might indicate extensive *in situ* knapping. Instead, large amounts of the available material were utilised. In Trench C, of 12 blades, 8 were deemed useable as knives or similar tools, while of 61 flakes, 39 were utilised; in each case about two-thirds saw use.

In all cases but Trench C the material was found within the ploughsoil. In Trench C, small flakes and chips of flint were found in the upper levels of burnt layer 17 situated between the topsoil and the Weald Clay and a possible arrowhead barb was recovered from the margin of the feature.

**Table 2** *Finds of flint from excavated trenches*

#### **Trench A**

Utilised blade	1
Utilised flake	1
Utilised butt	1
Knife	1
End scraper	1
Total	5

#### **Trench B**

Utilised flake	1
Retouched flake	1
Tool fragment	1

Total	3
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### Trench C

B&T Green Low	5
B&T Conygar Hill	3
B&T Sutton	2
B&T Indeterminate	5
Arrowhead blank	1
Tested piece	2
Fragment	11
Spall	28
Blade core	4
Flake core	1
Rejuvenation flake	1
Blade	4
Flake	22
Tip	8
Segment	17
Butt	13
Microlith	4
Micro-burin	1
Utilised flake	39
Utilised blade	8
Utilised spall	3
Utilised core rejuvenator	1
Utilised fragment	2
Utilised pebble	1
Utilised tip	5
Utilised segment	8
Utilised butt	7
Backed knife	4
Knife	1
Scraper	2
Piercer	4
Awl	3
Total	220

### Trench D

B&T Green Low	1
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Flake	8
Butt	1
Spall	1
Utilised flake	2
Utilised butt	4
Total	17

### **Trench E**

B&T Green Low	1
B&T Indeterminate	1
Flake	1
Utilised blade	3
Utilised flake	1
End scraper	1
Backed knife	1
Total	9

### **Trench F**

B&T Conygar Hill	1
Spall	1
Fragment	1
Tip	1
Butt	1
Utilised flake	2
Utilised blade	2
Burin	1
Awl/Piercer	2
Total	12

### **Trench G**

Spall	1
Flake	1
Blade	1
Piercer	1
Total	4

*The flint assemblage (see site archive for catalogue)*

Amongst the material recovered from North-east Park Field, the presence of microliths and blades set alongside arrowheads and flint dagger fragments at once indicates that two separate periods of activity are represented. Other than a few diagnostic pieces, much of the remainder could be placed in either category and for many individual types there is consequently a degree of uncertainty. Some basic assumptions can be made in order to assist analysis, for example, that flake cores are later than blade cores and scrapers on blades are likely to be Mesolithic. The numbers are not great and any misjudgement, therefore, is unlikely to affect the overall conclusions. A total of 1042 pieces of struck flint were recovered from the surface and from the evaluation trenches subsequently cut and the various categories are listed below. Descriptions of individual pieces can be found in the archive catalogue.

Type	No
Fragments/waste/tested pieces	54
Blade core	18
Blade/Flake core	4
Flake core	9
Micro-blade core	2
Core fragment	10
Core rejuvenation flake	11
Fabricator	4
Hammer stone	3
Flaked axe butt	1
Core tool	1
Chopper	1
Flakes	171
Blades	11
Spall	89
Blade butt	29
Blade segment	32
Blade tip	38
Microliths	4
Micro-burin	4
Utilised blade	57

Utilised butt	39
Utilised segment	38
Utilised tip	20
Utilised flake	150
Utilised spall	4
Utilised piece	3
Utilised core rejuvenation flake	7
Utilised fragment	5
Utilised pebble	1
Knives	27
Burin	5
Scrapers	42
Piercers/awls	36
Sickle fragment	1
Plano convex knife fragment	3
Unknown implement	1
Dagger fragments	6
Arrowhead blanks	9
PTD arrowhead	1
Triangular arrowhead	1
B&T Arrowheads	90
Total	1042

***Raw material***

Aside from a few oddments, the material appears to derive from a local source. The greater number of pieces are of dark-grey flint with light-grey patches, banding or mottling, the paler areas often tending towards the cortex. Others have an olive hue and this grades to an ochreous amber colour, but there is a range of colours from dark-grey to ochreous yellow that blend into each other on different pieces. At one end of the range is a striking and distinctive rich, reddish-brown, coloured flint similar to the 'chocolate' flint of Poland (Cyrek 1995) and that term has been adopted here. It appears to have been a favoured material particularly for arrowheads and daggers. There is no fresh cortex on any of the material and where it does occur it appears to be worn although not too extensively battered and rolled. The curvature and irregularity of pieces suggests that nodules were relatively small and uneven in shape and it is likely that they derive from a single parent seam and the staining may imply soliflucted material. The presence of one 'pap', the finger-like protrusions that occur in some flint strata, amongst non-struck material may indicate that the material hasn't moved a

significant distance from its parent deposit. There are striking similarities; particularly the yellow ochreous and 'chocolate' brown varieties, with material from North Park Farm, Bletchingly, across the Weald in Surrey (Jones 2013), a site on the Folkestone Beds close its boundary with the Gault Clay and little more than 1 km from the North Downs escarpment. It may be that processes at work there were mirrored in the south of the Weald. As in that site, the material from Brinsbury will have ultimately derived from the parent chalk, swept onto the lower ground as the escarpment receded, no doubt through bouts of solifluction, the final colour influenced by degree of contact with local mineral rich sands. Among the 'oddments' are a few pebbles, chert-like and translucent pieces that are likely to represent tertiary survivors in local beds. One piece, however, a utilised flake (Archives Flint Catalogue (Cat) L0) is of distinctive Bullhead Beds flint from the London Basin, the nearest deposits of which are north of the chalk along the spring line around Horsley and Fetcham in Surrey.

### ***Flint working tools***

Antler, bone, or wooden punches and flaking tools are absent from the assemblage although four fabricators are present. These are usually considered to be for flaking flint but other uses as, for example, strike-a-lights or drill-bits can be considered. They also occur across a considerable time depth with examples known from the Mesolithic period (Froom 1976) through to the Bronze Age (Lowther 1939, 160) and it is difficult, therefore, to allocate them to one part of the assemblage or the other. One piece made on a sturdy blade with removals at one end to form a pointed working edge (Archives Catalogue I11) has spalling and a little crushing along two edges indicative of pressure, indicating that the sides were used as much as the point (*cf* Froom 1976, 152). A second has the bulbar end rounded and the other 'nosed', while a third piece on a thick chocolate flint flake with bruising either side of the business end suggests that the tool was used obliquely. Other, more irregular, pieces may also have been used in knapping; a crested blade for example has been retouched at one end potentially for use as a fabricator.

A round nodule of grey heat-affected flint with evidence of bruising across the surface (Cat 09) is the only hammer stone to be recovered, but other pieces, a tested nodule, and a bashed lump have evidence of battering and bruising and may also have been used in this way.

### ***Debitage***

#### *Cores*

Several pieces have been tested by the detachment of a few flakes but evidently discarded as not of the required quality. These are sometimes small pebbles or more often pieces of completely irregular form. The impression is that good quality and sizeable material for knapping was in short supply and that almost any piece lying around on the surface was considered for its potential. One shattered piece has impact marks on the outer surface where a flake was successfully detached and one or two further flakes detached from the shattered surface. Another small nodule has test flakes detached from four platforms and might almost qualify as a core. Indeed, in the case of one broken pebble (from Cat L5) it is difficult to determine whether the series of detachments were more than simply testing. The former, along with other pieces, have evidence of bruising and battering on arrises that indicates they may have doubled as hammerstones. Several small chunks and other fragments almost fall into the 'bashed lump' category defined by Froom (1976, 28) i.e. nucleiform pieces abandoned because of error, thermal fracture, or for other reasons.

Of nodules that have been utilised for more than the odd removal, there are 33 cores, of which 18 are blade cores, four blade and flake, nine flake and two for micro-blades (or bladelets). Two fragments of micro-blade cores were also recovered. Many pieces (for example Cat 210), are made on fragments of flint rather than complete or quartered nodules. Where on nodules, they are small, at least one case (Cat 111) reworked from an earlier piece. There are six formally prepared bipolar pieces – all for blades, in one case for micro-blades: one of them developed from the face of what appears to have been a broken axe. The latter pieces aside, rarely are cores elaborately formed and the expedient nature of reduction coupled with a minimal concern for shaping may simply reflect the nature of the raw material

The micro-blade and blade cores are almost certainly Mesolithic in date, the flake cores less certainly so, for while they frequently occur in Mesolithic contexts (e.g. Froom 1976, 68), flakes were also the main product throughout the Neolithic period. A multi-platform flake and short blade core (Cat 275) might be regarded as earlier Neolithic, while the cruder flaked cores (Cat 49 and 53) might be regarded as later Neolithic or even Early Bronze Age. Nevertheless, it might be accepted that the ratio of blade to flake cores recovered provides a crude index of the intensity of knapping in the respective periods and identification of at least four of the ten core fragments recovered as being from blade cores does not detract from this. It appears that some effort was made to rejuvenate the platforms and flaking faces of cores. Eleven rejuvenation flakes were recovered, in one case (Cat 235) from a core with squat flake removals and potentially Late Neolithic or later. All but two pieces have evidence of subsequent use.

### ***Blades and Flakes***

Many flakes were utilised in some way but, 171, of which 24 are primary, were discarded without further elaboration. In comparison, the discarded blade count is very much lower, just 11 pieces being recovered. Few of these have two arrises or meet a 3:1 length-width ratio, some retain cortex and a more expedient though less critical and rather loose 2:1 definition has been adopted. The presence of 99 blade fragments, however, partially redresses the balance. While many such blade fragments were utilised, others appear to have been deliberately discarded without use. It is conceivable that some may have resulted from trampling or other accidental breaks though most appear to have been more deliberate. Generally blade fragments appear to have been snapped by clean breaks into three portions. Twenty-nine unutilised bulbar fragments occur, referred to by Froom (1976, 89) as butts and by Butler (2005, 113) as proximal pieces, snapped from their parent by a clean break; 32 middle segments (or mesial pieces); and 38 blade tips (or distal pieces). The presence of micro-debitage, here listed as spalls i.e. flakes and similar pieces less than 2cm long (Froom 1976, 28) provides confidence that the recovery technique was comprehensive.

### ***Tools***

#### ***Core tools***

Several relatively crude core tools were recovered. The neatest, the butt of a flaked axe or adze-head (Cat 286) with maximum dimensions 37mm x 37mm x 18mm, is in completely different flint to the rest of the assemblage: dense black and evidently not from the chalk Downs. Re-use as a core for blade removals after breakage indicates that the material was prized. A fragment of a flaked tool of unknown original form in chocolate flint (Cat 107) may also have been an axe. A further axe fragment (Cat 08

48) was re-used as a bipolar core. Other cores may have originated as broken core tools, (Cat 214) is one such. One crude expedient tool on an elongated nodule (Cat E7) with intersecting alternate flaking at both ends may have been used for chopping, the ends providing cutting edges, but there is nothing formal about it.

#### *Utilised blades and flakes*

A great number of pieces have been utilised in some way – flakes, blades, blade segments, fragments, spalls and odd pieces. In fact more pieces appear to have been utilised than discarded without use. Fifty-seven blades, for example, have some indication of having been utilised compared to only 11 left unused. The same could almost be said of flakes, with 150 utilised compared to 171 discarded, while utilised blade butts, segments and tips almost match their unused counterparts. Such apparently casually produced pieces are not easily categorised with any degree of certainty (From 1976, 154-8) and many display indications of a combination of uses. Where retouch occurs it is often irregular or for short distances.

Several blades exhibit heavy spalling along one (Cat 62) or both (Cat 103) edges, sometimes coupled with a short length of shallow retouch. In the latter case oblique abrupt retouch from one lateral edge at the tip with a detachment from the opposite face has produced a graver-like tool, but spalling along both edges indicates a cutting function. Similarly, detachments at the proximal end on some pieces (for example Cat 278), serve to form a graving edge. Several pieces have butts or tips detached: (Cat 231) is one such, utilised at the broken edge probably as graver or burin, but minute detachments also suggest a scraping spokeshave-like purpose. The proximal end of one, (Cat 279), has been truncated to form a point, but there is also minute spalling, abrasion and some notching along one dorsal edge. Other truncated pieces have an end trimmed by abrupt retouch. Minute spalling at the squared tip of, for example, (Cat 221a) indicates localised scraping, but abrasion and chipping is also evident along both edges indicating the primary use. An angled break at the bulbar end of one piece, (Cat G12), has left a sturdy point for piercing, while steep retouch at the distal end also forms a scraping edge. On one piece, (Cat 218), the tip has been truncated and burin detachment made, but micro-flaking along one adjoining edge, coupled with spalling along both lateral edges along with presence of a notch, indicate other uses. Burin-like detachments occur on other pieces, for example, (Cat K8) where abrupt retouch meets an obliquely snapped and spalled distal edge at a 45° angle.

In addition to pieces with use along lateral edges, utilised flakes include truncated, and pointed pieces and in many cases exhibit more than one attribute. In one case (Cat 37) the platform, bulb and shoulder have been removed and abrupt flaking forms a concave spokeshave-like scraping edge, but semi-abrupt shallow flaking along the opposite ventral edge may have been for cutting, while spalling on the dorsal edge indicates further use. In one case the butt of a truncated flake (Cat 237) has abrupt retouch across the break and along one edge emphasising the acute angle. In another (Cat 102), the tip has been snapped off and detachments made along one edge to form a point.

Retouch on either side of the bulb on one piece (Cat 261) serves to form a nose with a notch to one side. However, the tip of the flake has been snapped obliquely to form a point and some minute edge spalling towards the tip emphasises use there. Short stretches of retouch frequently occur, along with lengths of spalling and abrasion,

sometimes on more than one edge. Minute retouch of both lateral edges towards the tip of one piece (Cat 67) bring it almost to a point.

Chamfer and sheen on part of the broken edge of one piece (Cat 212), suggests that it may have been used in rubbing or polishing while spalling along one edge and at the tip suggests a scraping motion.

Several micro-burins have been utilised. One, (Cat 55) has evidence of use along one edge; another (Cat M3) has utilised the micro-burin break as a point, with evidence of use along the adjacent lateral edge. Several blade segments with one end snapped off and the other notched micro-burin style occur, with abrupt retouch along part of one lateral edge (Cat O9 and G4 and Cat 447 N3D). In one case (Cat 507), a blade butt detached by micro-burin technique exhibits minute abrupt retouch along the lateral edge at the junction of the break thus enhancing the angle in order to form a point.

#### *Blade fragments*

All three parts of snapped blades were used, and it is perhaps interesting that utilised butts occur in similar numbers, 39, to utilised segments, 38. These are the sturdiest parts of the blade, although use of tips, 20, was by no means uncommon.

#### *Microliths*

Four microliths are present. An obliquely blunted point (Cat 353), 25mm long x 9mm wide and with a notch on the opposite edge to the blunting, is perhaps evidence of an intention to snap the distal end off. A second, broken, obliquely blunted point (Cat 437), 19mm x 9mm, displayed oblique truncation from one lateral edge. A third, sub-triangular narrow form (Cat 362), 14mm x 5mm, snapped at the distal end with oblique truncation by abrupt retouch and with abrupt retouch on one lateral edge. A small blade segment with abrupt microlithic blunting of one edge can be included here (Cat 2). There is no apparent retouch along the base so the piece is not of type C (e.g. Butler 2005, 92). A further piece, a mere sliver of flint (Cat 5025) has been truncated in micro-burin manner, but leaves one edge notched and minutely retouched. These are all narrow blade types and the complete obliquely blunted piece is relatively small, while the broken example also appears similar. In contrast, two micro-burins (Cat G10 and Cat 12) are relatively large and, likely to be of earlier date. It could be that the Mesolithic component here represents more than one period.

#### *Notched pieces*

In some cases notched and concave pieces may have been intended to weaken the butt so that it would snap easily. In others they may have been intended as hollow scrapers and, given the presence of arrowheads in the assemblage, it is quite feasible that the often suggested use as spokeshaves for preparing arrow shafts is the case. Abrasion along one edge forming a concave area occurs on one piece (Cat 242) and minute spalling suggests scraping rather than cutting. In contrast, another, (Cat 206), notched along part of one edge by abrupt retouch also exhibits micro-spalling for the length of the opposite edge, indicating that the notch may have not seen use and instead provided security for binding or in some other way assisted in the work process. Notches occur in the butt of one piece (Cat 70) perhaps the sturdiest part of the flake, but minute spalling along one edge indicates use elsewhere. In some cases notches at one end of a piece may have been related to hafting. Some apparent notches may be the result of plough strike.

### *Knives*

A little more effort has gone into some pieces including 27 knives. These are generally backed in some way, either with a thin cortex remnant (Cat 438: Cat 579), a wide flake scar for the length of the piece or, by abrupt retouch along one edge (Cat 569: Cat 591: Cat 580).

### *Burins*

Formal burins, as Froom (1976, 143) pointed out, are notoriously difficult to distinguish from pieces utilised in other ways for any piece with two surfaces meeting at an angle of less than 90° could be used for graving. For cutting a groove Froom indicated that the graving edge is commonly 10-20mm wide although as ever there are exceptions. A number with potential, uncertain graving edges, or where such edges are combined with other uses, have been placed in the utilised flake category. Aside from these, a few stand out: flakes (Cat 251) with burin spalls detached from two edges; one example on a sturdy secondary blade with burin detachment and retouch at the distal end (Cat 287) and in another case (Cat 205), a burin on a blade produced micro-burin style with abrasion on the edge below the burin tip.

### *Scrapers*

Being amongst the quickest and easiest of tools to manufacture, they are also amongst the most difficult to date. Some impromptu scraping may have been carried out on utilised flakes but there are also 42 formal scrapers. Of these, in 18 cases the scraping edge is at the end, in three at the side, in four cases at end and side, while two are concave, spokeshave-like or 'hollow' scrapers. A further ten small end scrapers have been placed in a separate category of 'thumbnail' or 'button'. The latter category with flakes no larger than 30mm long and 30mm wide (Riley 1990, 225) have widely been attributed and accepted as belonging to Beaker assemblages. Some of the examples here, for example (43), are relatively crude, though would not be out of place in such a context. It is worth noting that small scrapers found in Beaker contexts at Down Farm, Woodcutts, Dorset, were similarly relatively crude (Green 2007). An attempt to categorise Neolithic scrapers has been made based on assemblages in the Stonehenge area (Riley *op cit*) and a tendency to thinner flake use in the later Neolithic noted. However, no comparison was made with Mesolithic assemblages which include a wide variety of scrapers on flakes (Froom 1976, 136-43) while analysis of scrapers from the Neolithic causewayed enclosure at Windmill Hill, Wiltshire, produced a different result (Pollard 1999, 335-6) and introduces a note of caution. Given the presence of other diagnostic pieces in this assemblage it might be considered unwise to place these into one period or the other. Scrapers on blades is another matter and although less common than scrapers on flakes in Mesolithic assemblages there is at least less likelihood of them being Neolithic. The end scraper on truncated blade (Cat 08 40), the side scraper on a blade (Cat 270) and three others on blade-like flakes may be Mesolithic, while three scraping edges at the end of utilised blades (Cat 221a; 224; and 10 B7) are also likely to be of that period.

### *Awls and piercers*

A number of utilised flakes and blades incorporated simple points, but there are also a number of pieces that have more specifically been constructed to form a piercing function. Even excluding points placed amongst the utilised flake category, there is a high percentage of piercers/awls, 36 in the assemblage. Butler (2005, 53) distinguishes



between awls and piercers, the latter essentially being more sturdy in order to pierce tougher materials, with a point formed by abrupt retouch and thicker triangular cross section. Some here, with abrupt retouch for part of two edges forming a point may be awls. More often the junction of a lateral and broken edge is enhanced by retouch to emphasise the point, (for example Cat 516 or 390) and it is difficult to determine. Certainly many are rather sturdy, with simple abrupt retouch along one edge at the distal end that creates a point (Cat K0). On others, for example, (Cat E11) forms a point with the broken edge. In the case of one piece (Cat 399) a small snapped secondary flake or blade, an angled break has been enhanced by abrupt retouch and coupled with further retouch along the adjacent edge forms a point. That some of these may be Mesolithic in date is suggested by one piece (Cat M3), a blade fragment, with one end broken in micro-burin style to form a point in conjunction with the adjacent lateral edge. Advantage is taken of sturdy flakes and in one case a core rejuvenation piece (Cat F8) has been worked to a point at one end. Another core trimming (Cat M8) is retouched at one end to form a working point.

### *Sickle*

The tip of what may have been a bifacially flaked one piece sickle (Fig 10, Cat 283) was recovered. The asymmetrical nature of the piece makes it likely to have been the end of a sickle rather than a dagger. Its dense white patina makes it stand out from the other pieces, but it is cracked and shattered by heat with signs of burning at the tip. Associations of flint sickles are few but four were found in pits with Neolithic pottery at Grovehurst in Kent (Clark 1934, 76), while an example from East Knoyle, Wiltshire, was found with a ground axe, an edge-ground axe, and a flat-based pot (Smallcombe 1937, 158-9) the latter is likely to point to a Late Neolithic date. Of relevance here is an example found in Barrow 9 at Hanging Grimston with a barbed-and-tanged arrowhead in association (Clark 1934, 78) and it is noteworthy that ten fragments were recovered from the Beaker site at Belle Tout, East Sussex (Bradley 1970, 355). Butler (20005, 172-4) concludes that they are likely to be Late Neolithic or Early Bronze Age in date. Such pieces are relatively rare. Clark (1934, 72) though, points to Sussex examples from Cissbury and Sleaford along with another found to the south of the Downs near Eastbourne.

### *Plano-convex knife*

Several pieces are likely to be fragments of plano-convex knives. Aside from a patch of cortex, one (Cat 484) is flaked all over the dorsal surface, with semi-abrupt retouch around the periphery and then smaller abrupt detachments closer to the edge. Its form is not neat and the side edges a little irregular and the piece is a little crude. The distal end is not rounded but trimmed abruptly and obliquely in a slightly concave manner. The distal end of a broken knife (Cat 211) is also likely to fall into this category as the dorsal surface exhibits neat invasive flaking on both edges and it has a squared off tip. A third broken piece (Cat M3) is also potentially a plano-convex knife, but crazed and broken by heat. Some cortex remains on the dorsal surface and there is invasive flaking along the lateral edges which continues around the end. At least one piece, scale-flaked, is similar in technique. Associations with Grooved Ware at North Carnaby Temple in Yorkshire (Manby 1974, 86) place this type within the Late Neolithic. Kinnes (1979, Fig 6.1, 6.2 and 6.3), however, placed them in phase D of his Neolithic round barrow and ring ditch seriation which might allow for a date any time in the 3<sup>rd</sup> millennium BC. Funerary associations tend to be with Food Vessels in the North (e.g. Gibson 1978, 34-48; Clark 1934, 159, other examples in Kinnes and Longworth 1985) though there is a

quite reasonable spread of surface finds present in museum collections in southern England (Field 2008, 209-210) and noteworthy that one example was recovered from the Beaker site at Belle Tout, near Beachy Head (Bradley 1970, 354) and another at Sparrite Farm, Rackham, nearby (Holden & Bradley 1975) in association with barbed-and-tanged arrowhead fragments and small thumbnail scrapers.

### *Daggers*

Six fragments from four daggers were recovered (Fig 10). The fragile nature of such pieces means that they will have been prone to breakage, although most examples from elsewhere are, surprisingly, complete. None of the fragments were re-used and there are clean horizontal breaks, i.e. none appear accidentally flaked from the edges; this and the size of the pieces suggests that at least in some cases breakage may have been deliberate. Two pieces conjoin. A hilt fragment (Cat 16) and blade (Cat 363: Fig 10) which together form a complete dagger of 119mm in length that has broken across the shoulder. An impact point half way across the blade has resulted in breakage. Bifacial invasive retouch across the piece and long intersecting thinning flakes occur across each face, with regular shallow retouch along the edge. This is neater and more regular on the blade. The parent flake appears to thicken a little towards the tip where greater effort has been made in thinning the piece and it is likely that the bulb lay at that end; thus providing a sturdier point.

The hilt measures 61mm long x 38mm x 10mm and the piece widens just above the break from 33mm to 38mm wide and represents the shoulder as it expands into the blade. It tapers towards the butt and the latter is slightly angled at c.12mm. The blade measures 59mm in length x 38mm x 9mm with a gentle curve from the shoulder to the point. The flint appears to have been light-grey in colour with milky streaks and mottling, similar to many other pieces on site and there is a slight ochreous sheen on one face. The blade portion however, has acquired a light brown-beige staining. It is evident that the staining developed post-deposition for it extends across the break and has consequently been subject to a different post-breakage environment to the conjoining hilt. In form this would approximate to a cross between Frieman's (2014) Class 3 and 4.

Judging by the nature of the distinctive reddish brown 'chocolate' flint, two further fragments (Cat 4 and 30) may be from a single dagger (Cat 4: Fig 10). One is just a little lighter than the other, but this may simply be the natural colour variation within the nodule. The tip of the blade and the hilt butt are missing and both pieces appear to derive from the middle sections. From other examples it is likely that the thicker end lies towards the point and consequently it is conceivable that at 10mm thick, one piece (Cat 4) lay closer to the blade point and, at in excess of 50mm width, may have represented the portion at the widest part of the blade. The width of the other piece (Cat 30: Fig 10), narrowing from 47mm to 37mm wide and 5mm to 7mm thickness, also suggests that it is part of the blade. Bifacial invasive retouch is evident across each piece with more intensive shallow-flaking of the edges, but there is more concentrated invasive flaking on one edge of the thicker piece (Cat 4) and just a hint of a change in angle of the edge too. Both pieces exhibit invasive flaking on both faces and both edges display spalling and notching evidently from use. A lack of staining across the breaks makes the origin of the fracture unclear but at least one break may be recent, while there is a potential impact mark centrally close to one broken edge which could imply a

deliberate attempt to break the piece. This is a wider dagger than that noted above, probably Frieman's Class 2.

A shoulder fragment from a third dagger (Cat 5008), i.e. from the hilt where the tang expands into the blade, is of a different form and likely to fall into Frieman's Class 1 category. It measures 32mm long x 35mm wide reducing to 27mm x 10mm thick and like the others it has been bifacially-flaked with further invasive retouch at the edges. The raw material is the light to dark-grey patchy flint similar to the conjoining dagger fragments mentioned above and found in other pieces elsewhere on site.

One broken dagger fragment (Cat 582) has been subjected to heat in antiquity. This is a bifacially-flaked fragment with further invasive retouch at the edges, but there is little diagnostic detail to allow it to be assigned to a class. The 29mm long piece appears to be narrowing, but measuring 50mm wide x 10mm thick and with neat retouch along one edge, it may be that it is part of the blade rather than the butt. The white patina with a little iron staining may be a post-deposition effect.

British flint daggers have recently been re-assessed by Frieman (2014: 2015) who suggests that based on the few radiocarbon dates available, they were current between 2250 and 2000 calBC. Three classes of long-tanged dagger were identified which merge into each other without clear distinction but largely based on the shape of the tang or hilt, the shape of the blade, particularly the position of maximum width, and the nature of the junction between the blade and tang. As the pieces here are fragments, the original form is not always clear. Nevertheless, it would appear that three of Frieman's classes of dagger are present, while a fourth is of uncertain type. The reddish brown 'chocolate' flint is prominent as two of the three pieces are of this material. A nodule of considerable size would be needed to make such tools. In each case the raw material can be matched elsewhere in the assemblage and is local to the site. Consequently, the daggers could have been made on site, even broken during manufacture. Within south-east England there have been a number of finds from the Thames, presumably ritually deposited, others from Peasemarsch in the Wey Valley, and Warlingham and Carshalton on the North Downs in Surrey (Field 1983). Curwen (1937, 146) also notes one found on the chalk overlooking Parham and, significantly, a group of nine fragments found on the Downs close to the Devils Dyke above Poynings, but perhaps more relevant is the one from Hurst Hill, Horsham in the Weald. A further example comes from the northern Greensand escarpment at Winterfold Heath in Surrey (Field 1988).

#### *Arrowhead blanks*

Nine flakes are considered to have been potential blanks or preforms for arrowheads. In most cases judgement is based on size and a degree of retouch around the piece. It is difficult to determine whether these were struck from Levallois cores, except in the case of (Cat 5009 and 254), probably (Cat 281) and possibly an oval-shaped flake from Trench C (Cat 329) which has seen subsequent retouch across much of the dorsal surface. Most flakes are relatively thin (e.g. Cat 33, 34 and 35) and some have evidence of former flaking across the dorsal surface suggesting that they may even have been struck from other tools: the shallow invasive flaking on the dorsal surface of one piece (33) suggests that it may have been a thinning flake from an axe-head or dagger. The raw material differs, (33) ochreous amber coloured flint, (34) ochreous brown-amber-grey flint with a patch of worn cortex on one face and (35) light-grey cherty flint with light patina and a little ochreous staining, but all could be accommodated in the local

range. On one piece (Cat 5009), ripples indicate that one side of bulb was used for the tip. On another (33), abrupt flaking either side of the bulb roughs out the point, while semi-abrupt flaking along the edges served to 'turn the edge' (Knowles 1944, 32) and provide a platform for invasive flaking. One, (34) sub-triangular in shape, is bifacially-flaked and semi-abrupt flaking or 'turning the edge' on opposing edges provides for further shallow invasive reduction. In one case, a retouched flake (Cat 434), evidently in process of being formed into an arrowhead, the bulb can be seen to lie at the angle between a lateral and distal edge rather than at the tip, though here presence of a strong arris provides strength.

#### *Petit tranchet derivative arrowhead*

Just one oblique petit-tranchet derivative arrowhead (Cat 75) occurs and the lack of finishing suggests that it may have been a roughout. In light-grey, local flint, the straight edge formed by abrupt retouch measures 35mm and the tranchet edge 40mm. This is a well-established later Neolithic type often associated with Grooved Ware pottery and frequently found in henge contexts, for example at Durrington Walls, Wiltshire (Wainwright & Longworth 1971, 171-3) where recent excavations there have simply enhanced the numbers (Chan 2010, 50).

#### *Triangular arrowhead*

A near triangular arrowhead (Cat 601) with shallow invasive flaking across both faces is squared off with abrupt flaking across the base. It is very leaf-shaped in knapping style and, with its convex sides, it may be that an attempt was being made to modify an earlier Neolithic piece by blunting the base. However, a very similar triangular arrowhead occurs in the material found with the Amesbury Archer (Harding 2011, 91, 100) and was compared to finds in the Netherlands where they occur in association with Beakers.

#### *Barbed-and-tanged arrowheads*

Ninety barbed-and-tanged arrowheads were recovered. Some are fragmentary or missing tips, or one or more barbs - two are just represented by barbs, a third is a small uncertain fragment. Being, in part, a surface assemblage some of the damage will inevitably derive from plough strike or contact with other stone rather than impact with a target. However, they are very light and offer little resistance to foreign objects. One, unusually, is broken lengthways in half and it may be that some were broken in antiquity, either as mishits during manufacture, during retrieval from targets, or even deliberately. In contrast others, for example (Cat 1), are perfectly complete and some are in such good condition that it is as though they were made only yesterday.

Despite breakage, the greater number can be assigned to one of Green's (1980) small flint arrowhead categories. His Sutton category covers miscellaneous pieces, while Green Low and Conygar Hill types are more elaborate 'fancy' arrowheads. Green Low examples exhibit a concave base with obliquely cut barbs often longer than the tang; while Conygar types are denoted by a straight or convex base with square barbs. Where it is possible to discern sub-types based on barb and tang attributes, the Brinsbury material includes one Green Low type F, four type G and six type J along with single examples of Sutton types C, G and J. At least one piece (Cat 489) was left asymmetrical, the oblique base on one barb suggesting a Green Low type, but the other barb does not match. This is by no means a unique example, another (Cat 5010), also having barbs of unequal length. In one case (Cat 22), a Green Low type, at 10mm in length, the barb

appears to be excessively long in relation to the piece as a whole, while a second example with prominent exaggerated barb (Cat 436) was also recovered. Neither of these approach the elaborate barbs recorded on examples on the Continent (Nicholas 2009). Green pointed out that such shaping of barbs and tang is likely to be a cultural rather than practical trait as these features would have been partly covered by binding and not visible when hafted. Being in local flint, it could be said that they were all knapped by a common local group and it may, instead, imply that the differing forms served different purposes: alternatively, that knappers of different cultural affiliation indicate the presence of a multi-cultural group.

**Table 3** *Barbed-and-tanged arrowheads*

Type	No
Sutton	28
Green Low	26
Conygar Hill	5
Indeterminate	31
Total	90

All pieces are relatively small although this may merely reflect the comparative lack of large enough nodules and none reaches the threshold of 50mm observed by Green (1980, 48) above which pieces fall into a rare, large group. The Sutton type is the smallest, an average of 25mm long by 21mm (range 17 to 36 by 15 to 28mm); Conygar slightly larger and almost as long as wide, with an average size of 25mm x 24mm (range 21-30 by 21-30mm); while the Green Low type were made on larger flakes, an average of 27mm by 25mm (range 21-37 by 20-32mm). In contrast, those from the Amesbury Archer burial, typically lie in the range 22-30mm long and 18-22mm wide. Variation at Brinsbury may have been a result of the restricted availability of large enough flint nodules from which blanks could be obtained.

Invariably, the bulb was utilised to fashion the point where greater strength will have been needed. The curvature of ripples on one piece (Cat 5010) indicates that bulb is at the point, on others a thickening of the profile suggest so. Bifacial invasive flaking is sometimes neater and more concentrated at the tip (e.g. Cat 572).

Many pieces (for example Cat 21; 292; or 293) display invasive flaking on one face only and semi-abrupt retouch around the edges on the other, leaving the centre of the flake untouched or nearly so and often with a very slightly curved profile. Efforts at unsuccessful thinning of one face (Cat 572) are indicated by step and hinge detachments. Neither side of one piece (Cat 5010) is flaked completely all over but the ventral is nearly so, with effort being concentrated at the haft end around the tang and barbs rather than the tip.

Not all are of good proportions and several are squat and stubby (Cat 17; 266; 267; 272; and 508). One stubby example (Cat 29) is one of two left close to a fire, its surface partly crazed and cracked as a result. A second piece (Cat 28), similarly with dense white patina was also affected by heat and partly crazed. Relatively crude flaking on some has left an uneven piece, for example, in one case (Cat 306) the barb on one edge has been left offset.

One very fine piece (Cat 410) with the tang and one barb missing, may have been broken during preparation as there is no visible remnant of the tang or second barb, instead simply longitudinal removals along the base. Others may also have broken during manufacture. One (Cat 288) is only partially flaked on one face leaving the tip unfinished. Missing elements at the base mean that it is impossible to be certain of the form though there is just a hint that a tang may have been intended. A further example (Cat 26) with unifacial invasive retouch, where only the tang and part of body are present, may also have broken during manufacture.

Retouch at the top of the tang on one piece (Cat 3) suggests that an attempt may have been made to re-use the piece. Similarly, the curious asymmetry of another (Cat 5) with invasive retouch on one face and semi-abrupt on the other hints at re-use. One piece (Cat 267) has been re-trimmed unifacially along one edge leaving the barb offset.

The greater number were made from the same local flint that was utilised for other tools on site, mostly shades of olive-grey but also the reddish 'chocolate' brown. There are, however, a few oddments. Several are translucent like opaque glass, while three are patinated. Two (Cat 263 and 267), are probably made on tertiary pebbles. Small patches of cortex appear on the face of three (Cat 209, 263 and 263) and towards the tip of a fourth (Cat 21), although Green (1980, 45) found that the percentage of secondary flaking on each side was not significant in terms of analysis - it could though have been deliberately left by the knapper.

A surprisingly high number of arrowheads come from the excavated trenches which may indicate that greater numbers lie at depth elsewhere on site. Fourteen come from Trench C of which two are of the Sutton type, four Green Low and three Conygar Hill; three from Trench C10, one of them Green low type; a Green Low type was recovered from Trench D; two Green Low type from Trench E and a Conygar Hill type from Trench F. Of those with provenance details, those examples found in fieldwalked squares are noted here, others are listed in the archive catalogue.

**Table 4** *Barbed-and-tanged arrowheads from trenches*

Type	C7	H2	I1	I2	J2	K1	L4	M3	M4	M5	N3D	O9	Field 2
Green Low	1				2				1				1
Sutton			1	1	3	1	1			1	1	2	2
Indeterminate		1						1	1		1		6

Barbed-and-tanged arrowheads have a reasonably lengthy currency from the beginning of the Beaker period and throughout the Early Bronze Age. Sutton types are associated with all Beaker material, while Green Low types occur with late Beaker associations and are an almost exclusively Beaker type. Associations with finely finished Conygar Hill types, however, tend to lie with Food Vessels, which are relatively rare in the south of England. Green (1980, 120 table VI. 4) indicates that examples from Beaker settlement sites are few in number, often found in single numbers (or no more than three). In contrast, larger numbers frequently occur in funerary contexts (Green 1980, table VI.7), for example, at Ardifferry 7, Stanton Harcourt 7, Barrow 31 at Lambourne,

6, and Mucking 11. Fifteen, mostly Sutton types, were associated with the well-known Amesbury Archer burial (Harding 2011, 90-100) and 18, again mostly Sutton types, were found with Beaker fragments at Thames Valley Park, Reading (Harding 1997, 24-6). Larger numbers often occur as surface scatters. Across the Weald, at Limpsfield in Surrey, just 18 (Field & Cotton 1987, 78 fig 4.3) and 22 near Farnham on the Hogs back (Lowther 1939, 159), but over 85 have been recovered from the slopes of Windmill Hill in Wiltshire (Devizes Museum). Curiously, all three sites also produced large numbers of other arrowhead types; at Windmill Hill over 81 leaf-shaped and 106 petit-tranchet derivative, which together represent finds from a considerable time span. It is as though the sites became traditional places for mock or ritual battles. The same cannot be said for Brinsbury, however, with just one petit-tranchet derivative and a (potentially modified) leaf. In central southern England, there are wider clusters of barbed-and-tanged arrowheads, i.e. recovered from larger areas; large numbers occur around the mouth of the River Avon at Christchurch, for example, with smaller clusters further inland around Basingstoke (Field 2008, fig 6.12 Appendix 6:8). Within the Weald, Lowther (1939, 159) mentions 100 from the Tilshead district in Surrey, while Curwen (1936) emphasised the large numbers, 361, from the Tunbridge Wells sands between Horsham and Peas Pottage. These contrast with smaller, though by no means less significant numbers, 46, from sites on the Weald Clay.

#### *The Lithics – Discussion*

At just over 1000 pieces, the assemblage is by no means a large one for a surface site in the Weald. A field at Paddington Farm, Abinger, Surrey, for example, produced over 10,000 pieces (Field *et al* 1987), while a site on St Catherine's Hill, Guildford returned over 3000 (Gabel 1976) and from excavations at North Park Farm, Bletchingly, on the northern greensand, 65,000 struck flints with estimates of over a million (Jones & Marples 2013, 106) present on the site as a whole. Surface sites on the clay do tend to return low numbers (e.g. English 1990: Rapson & English 2000) though in contrast excavations on the clay at Charlwood produced over 21,000 pieces (Ellaby 2004, 14). Undoubtedly the assemblage represents a palimpsest of activity, although it cannot be said that occupation was intensive at any one time. The diagnostic material points to two main tranches that occur during the later Mesolithic and the Chalcolithic/Early Bronze Age respectively. If, with all due caution, we can assume that the blades, blade fragments and blade cores, along with the utilised blades and utilised blade fragments, in all almost 300 pieces, represent Mesolithic presence and, in contrast, that the 440 flakes, flake cores, utilised flakes, arrowheads etc., are Early Bronze Age, this provides a crude index of the relative occupation intensities. In terms of relative size of the assemblage, it is worth noting that the 171 unutilised waste flakes can be compared with 5,945 from the Beaker site at Belle Tout (Bradley 1970, 346).

The Mesolithic material sits alongside other much larger sites in the Weald, although most of these lie on the sands and, Charlwood aside, even those sites amid the clay in reality often occupy local spreads of sand or gravel (for example English 1990). With its small microlith count it hardly qualifies as a hunting site, but the knowledge of a local flint source away from the chalk appears to have encouraged a presence which, judging from the number of utilised pieces, incorporated a number of activities. Mellars & Rheinhardt (1978) point to the presence of fewer core tools at sites in the Weald compared to the chalk suggesting that the lack of flint encourages the re-use of any larger pieces. This is certainly evident at Brinsbury. While the micro-debitage, some 89

retained spalls for example, points to some knapping *in situ*, the lack of primary flakes indicates that this was a minor activity. There is little waste, most pieces being put to use and potentially re-use, for although there is local availability, the raw material is generally poor and it manifests itself as small irregular pieces.

The presence of plano-convex knives, petit-tranchet arrowhead and a sickle fragment point to activities in the later Neolithic, while the Early Bronze Age associated dagger fragments and barbed-and-tanged arrowheads as well as the thumbnail scrapers, even though crude, could easily slot into occupation that also took place during the final centuries of the third millennium BC. Much of the otherwise undiagnostic utilised material could easily be of this time as well, although it is quite possible that some could be of later date. Green's (2007, 280) retouched, utilised and tool (RUT) component from a Beaker domestic site resonates here, although with the mixed component at Brinsbury it can be no more than a pointer. Undoubtedly, the scrapers, piercers, knives and other retouched and utilised pieces might be described as a 'domestic' component. The sickle fragment, if contemporary with the arrowheads, even hints at more settled activities and it is noteworthy that evidence of cultivation on the chalk has been suggested as being responsible for valley colluviation at this time (Allen 2005). The sickle fragments from Belle Tout add support to the association. However, while the daggers hint at a degree of prestige, the small-scale of the assemblage as a whole hints at no more than low key or transitory occupation.

No prestige or martial items were present within the domestic assemblage from four pits situated next to a hut at Down Farm, Woodcutts, Dorset (Green 2007, 286). There the RUT component is relatively low. There is a high proportion of scrapers among the tools, though these are often quite crude and frequently minimally retouched. Excluding the scrapers, only 16 pieces were retouched or utilised compared to 1,154 pieces of unutilised debitage. In contrast, over 50% of the material from Brinsbury was utilised in some way. Down Farm is situated on chalk where flint is relatively plentiful and amongst the waste flakes there were many that would have provided good blanks for scrapers. Even so frost damaged pieces from the surface were utilised.

Similarly, at the Beaker domestic site on Easton Down, Winterslow, Wiltshire (Stone 1931; 1935), the 'small round thumb scraper' was the dominant tool type with neat convex edges, often with semi-invasive retouch and said to be easily distinguished from the scrapers found at the adjacent Neolithic flint mine. Stone lists 14 of these scrapers as being present along with five core-scrapers, an end scraper and 16 blunt backed knives, an awl and a fabricator that he thought more probably used as a strike a light, along with a plano-convex knife. He referred to 'small delicate implements trimmed by pressure flaking' in contrast to the massive flakes from the flint mine. Like the Down Farm site, the tool count was not great. Belle Tout, near Eastbourne fits neatly alongside these within the domestic Beaker scenario with a high proportion of over 133, scrapers but only three barbed-and-tanged arrowheads, as does the nearby site at Sparrite Farm, Rackham, where over 800 scrapers, many of them of thumbnail type were found alongside only three fragmentary barbed-and-tanged arrowheads (Holden & Bradley 1975).

In contrast at Brinsbury, arrowheads are spread across the site and found in a number of widely-spaced excavation contexts. As such they do not appear to represent one or more levelled burials, but instead appear to have been recovered not far from where



they were left on the ground. Why they should be strewn around the site in this manner is not clear and brings to mind the spread of leaf-shaped arrowheads at Crickley Hill (Dixon 1988) and Carn Brae (Mercer 1981) both Neolithic enclosures that had been attacked. The pieces here, however, appear to represent arrowheads in the making as well as finished, broken and re-used examples and there is no indication that the deposit results from violence.

The site is not alone in producing large numbers of barbed-and-tanged arrowheads from the surface. As noted above, great numbers have been recovered from the southern slope of Windmill Hill in Wiltshire (Devizes Museum: McOmish *et al* 2005, 17); 22 were found on the Hogs back at Seale near Farnham (Lowther 1939, 159) and 18 from a site at Limpsfield (Field & Cotton 1987). More widespread clusters occur around the mouth of the River Avon at Christchurch (Field 2008 fig 6.12) and the upper reaches of the River Test around Basingstoke (Willis Collection, Hampshire Museum Service) as well as in the Tilshead district (Lowther 1939, 159), while Green's (1980, fig 47) distribution map suggests that there is another concentration around Horsham and another north of Brighton. Curwen (1937, 143) claimed that 43% of all arrowheads in Sussex came from St Leonards Forest, Horsham, in the Weald. He further suggested that barbed-and-tanged arrowhead finds in Sussex are 60% more frequent within the Weald than on the chalk and assumed that they must have been lost while hunting (Curwen 1937, 141-141).

Topping (2004) has highlighted the rituals involved in making arrowheads among certain North American indigenous groups and emphasised the restrictions on who was permitted to make these potentially deadly implements. Such pieces being intended to take the life of humans or animals took on supernatural and symbolic powers and control over production indicates that arrowheads may have been as much emblematic as functional and played a role in ceremonial and ritual, perhaps involving sacrifice. The burial in the Stonehenge ditch may be a case in point (Evans 1984) and the curious example of six barbed-and-tanged arrowheads embedded in the dismembered but reassembled joints of an aurochs found in a pit at Hillingdon, West London is another (Cotton *et al* 2006). Green (1980 178) drew attention to the find of a barbed-and-tanged arrowhead found in the skull of a wolf at Barrington, Cambridgeshire. Where barbed-and-tanged arrowheads are found in association with structures or features it is usually with burials; at Stonehenge (Evans 1984) and Barrow Hills (Barclay & Halpin 1999) almost certainly the cause of death. Commenting on traditions of the Cheyenne, Topping recounts how *'sacred arrows were the ultimate spiritual expression invested in an artefact, centring tribal identity onto a portable artefact.....sacred arrows were curated in a medicine bundle: two arrows had power over the buffalo (representing the food chain) and two over humans (particularly enemies of the tribe). The sacred arrows were treated in particular ways and, tasks were age and sex specific: they were carried on the backs of the bundle keepers' wives and could only be taken into battle by a prominent warrior (where they were believed to blind enemies). However, their principal ceremonial usage was in the renewal rituals which enhanced the links between the tribe and the supernatural world, restored social norms, reconfirmed origins, guaranteed power structures and gender differentiation and helped to integrate the various segments of the tribe'* (Topping 2004, 177-8). From this it can be taken that arrowheads served other purposes beyond that usually anticipated and the examples at Brinsbury could represent ceremonial activity as much as anything practical.

The presence of flint daggers adds a further significant component to an already unusual site. Invariably considered a weapon of war, they are easily broken. The widest part is usually towards the blade tip and unlike the stabbing, thrusting movements required of rapiers and dirks, the shape is more suited to slashing or cutting (Skak-Nielsen 2009). Despite the retouched edges, neither are they particularly sharp when compared to the edge of a freshly struck blade which will be keener and cut more effectively. However, Skak-Nielsen (2009, 349) has suggested that they were more appropriate for a symbolic role in despatching livestock, an 'implement of sacrifice' or for flaying carcasses and the ritual involved in the head and hooves burials, for example, that on Hemp Knoll at Bishops Cannings, Wiltshire (Robertson-Mackay 1980), can be brought to mind. Animal bones are missing from the Brinsbury inventory, perhaps because of acidic soil, but it may be that the site incorporated such activities along with the ceremonies that encompassed them. Bifacial knife daggers of similar size and form were used in sacrificial and ceremonial activities by the Maya in Mexico, for example, with some personified and thought to represent deities being dressed with eyes and teeth (examples in Merida and Cancun Maya Museums, Mexico).

## **Discussion**

The plans (Figs 4-6) indicate that finds were not distributed randomly across the site and there appear to be clear concentrations, most notably on the southern slopes of the natural bowl. These could indicate that an underlying archaeological feature or context had been recently disturbed most probably as a result of the deep soil disturbance in advance of cultivation. Much of the flintwork is in good condition and has not been excessively damaged, indeed several of the arrowheads are in almost pristine and show no sign of wear. In contrast, others appear as fragments, a mere tip or tang. Similarly, they are of differing materials and while some therefore appear to have been brought to the site, the presence of blanks suggests that arrowheads were being made here on site as well. The ritual and symbolic attributes of arrowheads to non-western communities are outlined above and it is worth bearing this in mind in any interpretation of the site. However, the composition of the assemblage is curious and unusual with arrowheads of different forms and it could be that other interpretations are appropriate.

No trenches were placed on the base of the depression but with hindsight this area may have provided a focus to activities. The site appears to have been favoured during at least two spells of intensive activity and its characteristics therefore endured. Whether it simply provided a degree of shelter on the otherwise exposed ridgetop cannot be ascertained. It seems unlikely that any water feature was responsible for its formation since springs do not arise in the Weald Clay, but the 'bowl' could have harboured a particular type of vegetation that attracted or warranted attention.

As noted above the microlith count is low and the location is unlikely to represent a purely hunting site. Some knapping had taken place in the immediate locality, the small nodules being obtained from an unknown source. Unfortunately the nature of the contemporary ground surface is entirely unknown and it is worth recalling that a

considerable amount of loess – a fertile, wind-blown silt, laid down before and after the last glaciation - may have still covered the surface.

Whether the alignment of four stakeholes encountered in Trench G once formed a fenceline, or palisade, or are part of some other feature is unclear. Equally their date is uncertain but the reddish-brown fill with comminuted charcoal fragments suggest that they are unlikely to be recent (they do not correspond with any former known boundary) and more likely to be cut into the old land surface found in Trench C, where the material is almost identical. The scattered features encountered in the latter trench, the burnt areas, could represent isolated and discrete episodes, but may also be considered to be remnants of a wider, now truncated, activity surface. Feature 505 would have been part of this, a small natural depression providing a trap for cultural remains. Seventeen barbed-and-tanged arrowheads or portions of them came from this trench with one barb being found at the base of the ploughsoil at the interface of Layers 011 and 017 immediately over Feature 505.

If the surface has indeed been significantly truncated, the Chalcolithic/Early Bronze Age material found in the topsoil, as with the Mesolithic flintwork, may be the only representative of the former activity. Further excavation here should treat the base of the soil profile as fragile. With few exceptions, the arrowheads were found within the confines of the natural bowl. The majority were found on the lower part of the northwest slope of this depression where some may have moved downslope by gravity or weathering.

A single potsherd from Trench C is identified as Deverel-Rimbury on account of its flint temper, but this also came from the topsoil. Its unusual tooled decoration is considered a feature of Deverel-Rimbury fine ware and compared to a similarly decorated Globular Jar from the barrow at Itford Hill by Seager Thomas (2008, 31). The sherd appears to be in good condition, found well within the trench footprint but perhaps surprisingly associated sherds were not encountered in the same or any other context. While it is conceivable that other sherds lay beyond the confines of the trench it can also be considered that the sherd is an isolated one having become detached from the rest of the pot by cultural action. It is even possible that it was spread onto the field with some of the rubble. It may well be that some of the flint work in the assemblage is of this period, in particular, the irregular cores and some of the utilised flakes and scrapers. Appropriate caution is exercised however, given the nature of the small and irregular pieces of raw material available for knapping.

Finally it is worth noting that the scatter of Roman material, while relatively thinly spread, is quite significant and may point to the presence of a building or roadside settlement alongside Stane Street.

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## *Appendix*

### Other material by Gill Turner

#### Excavation

Almost all the finds were recovered from top soil contexts.

A small amount of Post-medieval and Modern pottery and glass were found only in Trench C. Eleven small and abraded sherds were recovered weighing 52g: 8 Glazed Red Earthenware and single sherds of Tin-glazed, Creamware and White Glazed Earthenware. The 7 glass vessel and window fragments weighing 15g are all Modern. A single sheep Bone was recovered from Trench D and a jawbone from a small mammal from Trench F.

Ceramic Building Material amounts to 16 fragments (218g), of which 12 are from Trench C (204g), 2 from Trench G and 2 from Trenches D and F. One tile fragment from Trench C is likely to be of Roman fabric but the majority is Post-medieval or Modern.

Foreign Stone was recovered from Trench C including 3 pieces of Chert of unknown origin (188g) and 3 of Slate (20g). Slate was also found in Trench F (12g) and an unidentified Foreign Stone in Trench D (6g.)

Slag was found in Trench C (82g), Trench D (84g) and Trench G (44g).

There are also 2 small samples from Trench C of Ceramic Land Drain. Both are likely to be 20<sup>th</sup> C.

A total of 35 Fire-cracked Flints (436g) were recovered and discarded, of which 28 were from Trench C, 6 from Trench D and 1 from Trench G.

#### Fieldwalking

Other surface finds from the 2010 include 48 sherds of Post-medieval and Modern pottery weighing 389g including Glazed Red Earthenware, Stoneware, Tin-glazed, Creamware, Blue & White Transfer-printed, Slipware and Bone China. There are also 3 Clay Pipe stems from 18<sup>th</sup>/19<sup>th</sup> C.

The majority of the glass fragments are from Modern bottles and other vessels but also a few from 18<sup>th</sup> C Globular Wine Bottles.

Ceramic Building Material totals 426 and weighs 10.9kg, the majority being Post-medieval and Modern with only 15 likely to be Roman.

Foreign Stone of 194 fragments weighing 7.18kg, consists of mainly Limestone, Granite, Slate and Chert and water-rolled Flint pebbles. Slag was also recovered weighing 2.27kg.

A small number of cattle and sheep bones of uncertain date were also found.

In 2012 a total of 16 further surface finds were recovered, all Post-medieval and Modern including Stoneware and Glazed Earthenware, Chert, Glass and CBM.