

# NORTH PARK QUARRY (NPQ 11)

Archaeological excavations in December 2011 and  
January 2012 by Phil Jones





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**Summary**

*A large part of the site was blanketed by clays of a solifluction lobe, on which there was little evidence of usage in antiquity, except near its eastern edge where first revealed during archaeological fieldwork in 2009. Features were also evident in the south-west corner where Folkestone Beds sands remained uncovered. In the east, two features, including a hearth, were the continuation of the Bronze Age streamside activity found previously, and, apart from a tree-throw with Mesolithic or Neolithic lithics, most of the numerous other such hollows and larger pits in the south-west corner that produced archaeological finds were of similar date. Amongst them was another hearth, as well as six small cremation pits on the edge of the solifluction clays, and perhaps when dug on the edge of woodland, that contained variable amounts of burnt human bone. Further east on the clays a curious configuration of gully and multiple postholes found by the southern baulk may be the northern end of an enclosure and was associated with early medieval pottery, as was an isolated, short length of ditch with a posthole termination closer to the east end of the site. The medieval field system found in previous years did not extend on to the clays.*

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## INTRODUCTION

Archaeological work in 2011/2012 at the west end of the North Park Farm quarry in Bletchingley, Surrey followed earlier work successfully completed by the Surrey County Archaeological Unit (SCAU) in the same pit that includes the major excavation of a medieval and Tudor manorial complex at Little Pickle (Poulton 1998), the sampling in 2005 of a nationally important and long-lived palimpsest of Mesolithic activities immediately south of the new area (Jones *et al* forthcoming) and other large areas to the east of it that were monitored and sampled for their multiple periods of occupation and human usage in 2001, 2009 and 2011 (figs 1 and 2). The work began with examination of a 1.1ha area of pasture west of that site in the former Kitchen Meadow in December. After the area was machine-stripped of its soils and a substantial layer of re-deposited clay in its north-west corner, a few features of archaeological interest were exposed, sampled and recorded. In January 2012 the north/south bridleway to the east was closed, and SCAU supervised the stripping of subsoils from this corridor of 0.25ha that lay between Kitchen Meadow and the area of the June 2011 excavations. A few more features of archaeological interest were sampled, recorded and surveyed in the two days that followed the stripping.

## THE SOLIFLUCTION LOBES

It had been expected that the depth of subsoil over the site would be similar to that found east of it in the area investigated in the summer (NPF 11), but this proved not to be so. Except in the south-west corner, where it lay as deep as previously found further east over Folkestone Beds sand, little or no subsoil had developed. This is almost certainly because through most of the rest of the site a solifluction lobe of superficial deposits that blanketed the natural sands had inhibited the development of the deep subsoil and topsoil sequences observed elsewhere. Viscose masses of eroded materials had slumped down the scarp of the Downs in periglacial freeze-thaw conditions towards the end of the last glaciation and came to rest where the slope began to level out across the outcropping band of Folkestone Beds sands.

The basal layer of these deposits was a bed of close-set stones in a clay matrix, 503, with a majority comprising sub-rounded pebbles with a blue/grey cortex that derive from the Blackheath Beds, and the remainder being flint nodules with stained cortexes that had been washed out from the Clay-with-Flints. Both of these Eocene lithologies can be found *in situ* as successive layers over the plateau surface of the Downs, and the greater bulk of the lobe – largely a brown pebbly clay, 504, - is also derived from the Clay-with-Flints, but probably mixed with some clay from the Gault that outcrops immediately north of the site.

The eastern edge of the same basal pebble bed had been exposed along the western side of the area investigated earlier in 2011 on the opposite, eastern side of the bridleway. Very similar pebbly clays as 504 as were found across most of the current site were present, overlying the pebble bed in the north-west corner of the main part of that site.

During the concluding days of archaeological work along the bridleway strip, the solifluction deposits began to be machine-stripped from the Folkestone sands in the greater part of the site further west, providing an opportunity to observe their make-up and depth. Unexpectedly, they lay deepest within a broad palaeochannel, up to 50m across and over 3m deep, which ran from the north-west corner of the site where it cut the Gault Clay on its north

side, and south-east towards its south-western corner. Its creation had left an upstanding and fairly level surface of the Folkestone sands in the south-west corner, where the density of tree-throws and other features was as high as in most areas examined west of the bridleway strip, and a smaller remnant of the original surface of the sands on its north side close to the baulk. East of the latter, however, the sands had been carved away by a subsidiary channel filled with solifluction deposits, that ran north to south to meet with the more substantial palaeochannel towards the southern end of the bridleway strip. It was pebble bed and clays of the lesser channel that blanketed the strip and whose eastern edge was exposed in the NPF 11 site.

## **ARCHAEOLOGICAL FEATURES**

Very few negative features were found across the solifluction deposits of the site, and the only area with a similar density of archaeological features and tree-throw hollows to that of the earlier 2011 and 2009 excavations was in the south-west corner where the Folkestone sand had not been engulfed by them. A few, however, were found on the leading edge of the lobe.

In that south-west corner, in addition to some tree-throw hollows, six or seven pits with ashy fills and burnt bone fragments, two more with single sherds of Bronze Age pottery and a probable hearth were located. An internal feature in one of the tree-throws contained Late Bronze Age sherds and a few struck flints, and another yielded sufficient struck and burnt flints to be able to surmise that it, too, was of prehistoric, and possibly Mesolithic or Neolithic, date. On the solifluction clays was another hearth pit, as well as the only linear feature. This formed part of a complex of features along the southern baulk that included a gully enclosing seven post-holes, and a charcoal-rich layer containing a few sherds of early medieval shell-tempered pottery.

The exposure of the solifluction deposits on the bridleway corridor revealed three small tree-throws, two hearth pits, one of which was large and full of calcined flints, and a curious early medieval gully.

### **The tree-throw hollows**

Twenty-two tree-throw hollows identified in the south-west corner were of various sizes and most often ovoid in plan with slightly clayey, podsolized sand fills. The latter were pale grey to buff in colour, and similar fills of such features elsewhere have proved to be amongst the earliest on site, with some found in the 2009 and earlier 2011 areas containing struck flint debitage of wholly Mesolithic character, strongly suggesting that they may have been utilised as rough shelters or knapping floors during that period. A few others of this colour identified previously, however, contained later types of struck flints and Bronze Age pottery sherds.

Each of the south-western tree-throws was sampled by half section, but the finds from only one warranted its complete excavation. This was 529, which lay towards the east of the array and contained 16 struck flints of Mesolithic or Neolithic character and 0.56kg of comminuted calcined flint debris. Similar finds from six other tree-throws were too few to surmise whether they had been contemporary or residual, with single struck flints from 510, 512, 527 and 541 that also contained four calcined flints and two burnt flints from 528. Two small and worn sherds of Bronze Age pottery were recovered from tree-throw 509, but the feature contained no lithic artefacts.

Four tree-throws in the south-west were located either on the clays of solifluction lobe or on the Folkestone Beds sand, although in each case not too distant from junction of the two and

close to the western baulk of the site. All four had fills of mid grey clay containing many fragments of charcoal, and three of them were elongated and similarly aligned north-west/south-east (517, 518 and 552). The fourth may be similarly aligned but ran below the baulk (519). Sections through all of them produced no dateable finds, but the dissimilarity of their fills to the other tree throws may suggest a difference of period dating, possibly much later.

Only two probable tree-throws, 362 and 363, were located on the bridleway strip, and both lay close to each other towards its southern end where they cut the pebbly clays of the north-south solifluction lobe. Both were relatively small and filled with a mid grey sandy soil that contained no finds, but the more northern of the two, 362, was distinguished by east and west extensions from it, filled with pale grey sand, giving it more of the typical appearance such hollows.

Apart from those few described above, what is remarkable about the solifluction deposits is the paucity of tree-throw hollows, despite the abundance of such features further east, such as the area investigated in 2009 where over 140 were identified. Almost the whole of that site, however, lay over Folkestone Beds sands, where, it could be argued, the stability of the root plates of trees in a storm would have been less than over clays. The ease of rotation during their fall through sand may also have caused deeper hollows than may be expected over clay.

### **The cremation burial pits**

Six small features with fragments of burnt bone in their shallow, charcoal-rich black fills, lay in two loose concentrations in the zone where Folkestone Beds sands was overlain by solifluction deposits in the south-west corner.

An eastern cluster lay wholly on the clays and comprised a regular, circular pit with a bowl-shaped profile, 520, with a diameter of 42cm and depth of 10cm, a similar, but smaller pit, 521, with a diameter of 32cm and a depth of only 6cm and two smaller, and more irregular features, 522 and 523 just east of the latter and north-east of 520. 522 was roughly ovoid, measuring 18cm by 16cm and 4cm deep, and 523 was even less substantial, but distinguished, like the others, by its black fill and comminuted fragments of burnt bone.

The western cluster was of two bowl-shaped, circular pits, 505 and 507, that were slightly larger than those found further east, and had been cut through the Folkestone Beds sands, and pit 550, which had a similar black fill and lay north-east from them on the solifluction clays. 505 was the largest of the cremation burial pits in area, with a diameter of 62cm, but a depth of only 7cm, whereas 507, though of smaller diameter, at 47cm, was 12cm deep. Both contained comminuted bone fragments, but in addition, there are larger fragments. 550 was oval, measured 42cm by 39cm across, and the upper 7cm of its 11cm deep bowl-like profile was more densely packed with a black charcoal-rich fill. Only a few tiny fragments of burnt bone were recovered from it. Another small, circular pit with a bowl-like profile, 530 lay *c*10m south of pits 505 and 507, but its black, charcoal-rich sandy fill contained a profusion of shattered calcined flints rather than bone. It had a diameter of 65cm and was 13cm deep.

### **Other prehistoric features**

Tree-throw 509, which contained two small pieces of Bronze Age pottery, also lay in the area of the western group of cremation pits described above, but three more features with similar sherds lay between the two clusters.

Pit 525 had been dug through the Folkestone sands just south of the edge of the solifluction lobe and was round in plan with a diameter of 40cm, a depth of 10cm and a shallow, bowl-like profile. Eight calcined flints and two small pieces of ferruginous sandstone from its charcoal-flecked dark grey fill accompanied the upright rim sherd of a calcined flint-gritted jar.

To the south-west was another, slightly larger pit, 539, that was also round in plan, with a diameter of 74cm and a bowl-like profile only 10cm deep. The only finds from the total excavation of its mid brown sandy fill are four sherds of similarly coarse, calcined flint-gritted pottery, including an upright, simple rim sherd of c16cm diameter that has a slight off-set at the shoulder. The vessel from whence it came was almost certainly a Late Bronze Age shouldered jar.

Further south and close to the baulk of the site was a relatively large, pear-shaped tree-throw, 548B, which measured 2.9m long by 1.58m wide and was largely filled with a sterile mid brown loamy soil. Slightly off-set in its more bulbous eastern end, however, was a tertiary feature, 548A, that was sub-rounded in plan, measuring 78cm by 68cm, but which extended as deep as the tree-throw, with both sharing a basal depth of 32cm. The fill of 548A was of dark grey charcoal-flecked sand with many pieces of ferruginous sandstone (23 pieces weighing 0.7kg were quantified from half of the feature), four calcined flints and four more that had been struck, a large irregular block (0.6kg) of Upper Greensand and 17 sherds (0.4kg) of coarse, calcined flint-gritted pottery that represent more than one vessel. The only elements of form apparent in these sherds is the slight angle of shouldered jars of Late Bronze Age type, and this includes the largest sherd (0.17kg) that also has an internal, sooted residue. 548A appeared to have been a purposefully dug feature, rather than having been the final fill of the greater tree-throw, although it seems likely that the settling of the root plate hollow was still proceeding when the pit was dug through to its base.

Two pits containing burnt debris had been cut through the solifluction clays of the bridleway strip and although the smaller of the two is most likely to have been of prehistoric date, the larger one may be related to medieval activity.

The smaller and more northern of the two, 00, was oval in plan, measuring 54cm by 40cm across, and with a bowl-like profile 14cm deep. It was filled with a fire-reddened clay that contained a few fragments of flint and ferruginous sandstone, but none that was struck or burnt. The pit lay close to the focus of Bronze Age activities identified in the NPF 11 site, however, and may be associated with such burning activities as were found there. It cut the upstanding area of solifluction pebble beds, 174, however, which had formed the western bank of watercourse 170, making it isolated from the other features of the focus of activities.

The southern hearth pit, 358, was a large, ovoid feature, 1.4m long by 1.3m across, and with a shallow, almost flat, base c10cm deep. It was filled with burnt flints set in a black clayey matrix, and at least two linear patches of charcoal were identified on the exposed surface of the fill towards its eastern side. No artefacts were recovered from the sampled western half, but a crumbling fragment of animal bone noted along its southern side suggests that it may not have been prehistoric, since such organic finds have only ever been retrieved from post-Roman features in the quarry due to the acidic nature of the soils. It may, therefore, be related to the early medieval activities that had involved the digging of gully and posthole 359 and 360, c4m distant.

### **Gully 359 and posthole 360**

Hearth pit 358, described above, lay west of a gully that was aligned north-east to south-west and had an oval posthole immediately beyond its northern end. From that termination, which was neatly square-cornered, though slightly bulging, its edges ran straight and parallel-sided for 4m before the feature narrowed from 0.8m across to a less regular width of between c0.4m to 0.5m. It also shallowed from 0.2m deep within its flat-based northern end, to less than 5cm beyond that until where it petered-out at c11.3m. That southern extent seems unlikely to have been as purposefully dug as its first 4m, and seems likely to have served to drain it since its fill was of pale grey, waterborne silt. It is probably no coincidence that an upstanding spine of the solifluction pebble bed, noted and numbered as context 364, lay beyond the tailing-off of the gully and on the same alignment, although immediately south-east of where it had probably once followed through. It seems likely that, before any woodland clearance, surface weathering of the solifluction deposits may have been influenced by the presence of strands of the more resistant pebble bed, like those of 000 and 000 as well as 364, which were less easily washed away than the subsequent clays. The curious alignment of the gully and its siting, therefore, may have been largely determined by such an outcrop.

The same grey silt comprised much of the upper fill of the formal end of the feature where it overlay a more mixed, grey to brown sandy soil. All of the finds from the feature came from that upper fill, however, both in the three excavated segments, A, C and E, and those in-between, B and D. During the stripping of the site the feature was noticed from the exposure of pottery rim fragments in, what came to be designated as, segment B. Excavation of the terminal segment A soon revealed a large, full-profile, sherd of the same shell and sand-tempered jar that also extended into segment B. No finds were recovered from the excavated segment C, but the adjoining segment D, that comprised the southern end of the more formal part of the feature, included a sherd of early medieval coarse sand-tempered pottery and a cattle metatarsal. In the shallower drain beyond, the excavated segment E included residual struck and burnt flints and a prehistoric sherd as well as another pottery fragment that is of a medieval sand-tempered fabric.

Immediately next to the gully terminus, but slightly askew of its axis, posthole 360 measured 0.48 x 0.34m across, and was c18cm deep, but its dark grey/brown clayey sand contained no finds.

The function of this gully and posthole is not known, but the careful digging of the former, most especially its square end and straight, parallel sides suggests that a specific purpose had been in mind.

### **The southern post and gully configuration (fig 4)**

Towards the south-east corner of the site a series of seven close-set post-holes was found, that were bounded on the north, east, and possibly western, sides by a shallow gully. Lying between and over them, and filling all of these features, was a charcoal-flecked mid to dark grey clayey loam, 561, although this did not extend further than the gully. After cleaning the southern baulk over the gully in box section 567, layer 561 was observed to be c9cm deep and sandwiched between c38cm of the ploughsoil context 500 and the clays of the solifluction lobe.

The northern arm of gully 562 ran straight for a little over 6m, roughly parallel with the adjacent southern baulk (and in accordance with the general orientation of Kitchen Meadow) before curving south to disappear beneath it. Its western end was not as clearly defined, however, although the beginning of a curve southward was perceptible just beyond segment 565, which is

where a very decayed and fragmentary long bone was recovered. At the west end of the configuration, the relatively broad feature of 543, which was 19cm deep and extended into the baulk may, in part have represented the southward return of the gully. Four short segments of it were excavated, 563-66, which showed it to have been of variable width of between 28cm and 40cm and with a bowl-like profile between 8cm and 10cm deep. Two small and worn prehistoric sherds were recovered from segments 565 and 566, but are most likely to be residual for reasons suggested below, and two lumps of ferruginous sandstone, context 568, lay on the surface of the fill of unexcavated segment 547.

East from 543 within the enclosure defined by the gully, ran an approximately straight alignment of six postholes (545, 546, 557-560), of variable sizes and unequally spaced, and with a smaller example, 544, close to 559 on its south-western side. All were filled with the same layer that sealed them, 561, but with noticeably more of the carbonaceous material present. Their dimensions were as follows, running from west to east:

560	76 x 71cm, by 19cm deep
544	17 x 17cm, by 6cm deep
559	23 x 23cm, by 9cm deep
558	22 x 18cm, by 6cm deep
557	37 x 23cm, by 24cm deep
545	27 x 27cm, by 12cm deep
546	50 x 38cm, by 30cm deep

Finds, other than comminuted charcoal, were absent from the postholes of average size, except for two burnt flint scraps and a struck flake from 545, but the largest, 546, the furthest east, contained six struck flakes, three calcined flints including another that had been struck and two irregular lumps of Upper Greensand (53g and 194g).

Despite these prehistoric scraps from the postholes, they, too, are also considered to have been residual, because the only finds recovered from the layer that also sealed them were three sherds of unrolled pottery of the early medieval shell-tempered pottery fabric S2, with one from near 545 and two from near 546.

### **The absence of field ditches**

As well as the paucity of tree-throws across the solifluction deposits, another remarkable absence is of field ditches. The various elements of a buried early medieval field system were followed through the excavations of 2001, 2005, 2009 and June of 2011, and one or perhaps two of the east-west ditches found on that last site (NPF 11) were expected to follow through, at least into the area immediately west of it along the bridleway strip and up to the ditch and bank that ran alongside it.

Despite careful examination that included a fresh exposure of NPF 11 ditch 107 in the western baulk section of that site and a box section test pit dug where it should have emerged, no trace of its continuance just 1m further west was observed. The reason for this is probably the rise of the upstanding tract of basement pebbles 173 in this zone, which may have caused ditch digging of the final western length of ditch 107 to have been less deep. The same may apply to the lack of any perceived continuation of the lesser ditch 106 further north. The alternative is that the termini of both had been in the baulk that remained, although this seems unlikely as there would have been 18m gaps between them and the north-south ditch and bank. This presumes, from a consideration of the topography of the site with rising ground both east and west, that the

western limit of the field system abandoned upon the emparkment of the area prior to the mid 13th century, had been the watercourse that was later formalised into the present ditch. This is the more probable if it was farmed from the 12th century settlement found at the southern edge of the area examined in 2005 and sited next to Place Farm Lane.

The present site was in Kitchen Mead in 1761 and southwards was Bantern Mead, the two later joined as Kitchen Meadow (see Poulton 1988, figs 1.3 –1.5). The whole area lay within the North Park in the medieval period, with the manor house at Place Farm just inside also. Kitchen Meadow was almost certainly only defined after disparking, a suggestion probably confirmed by the fact that no remains of the medieval or Tudor period have been recovered from the excavations within it.

## FLINTWORK by N J Marples

### Introduction

83 worked flints (including two chips with maximum diameters less than 10mm) weighing 1058g were recovered from 21 individual contexts, representing 13 features and unstratified finds from various locations across the site. Forty-four flints, or just over half of the site total, were retrieved from a single feature, tree-throw hollow 529, and no other context produced more than 10 lithic items.

Most of the material is likely to be of Mesolithic or Neolithic/Early Bronze Age date, but several later Bronze Age pieces, mostly tools, were collected from the machine exposed surface of the solifluction ('head' type) deposits covering most of the site, and these are likely to have originated within the overlying topsoil, although they are all in good condition.

A provisional breakdown of flintwork from the site (excluding two chips), grouped by context type, is presented below in table 1. Detailed listings by context are appended in table 2.

Context type	Cores	Irregular waste	Core dressings	Flakes & flake fragments	Blades & blade fragments	Other tools, tool waste & modified pieces	Total	Overall site %	Weight (g)	Burnt
Tree-throw hollows	2	1	1	32	19	2	<b>57</b>	70.4	286	23
Post-holes	-	-	-	5	-	4	<b>9</b>	11.1	69	2
Pits	-	1	-	2	1	-	<b>4</b>	4.9	56	3
Gully	-	-	-	1	-	-	<b>1</b>	1.2	1	1
Unstratified	-	-	-	2	-	8	<b>10</b>	12.3	646	-
<b>TOTAL</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>42</b>	<b>20</b>	<b>14</b>	<b>81</b>	<b>100</b>	<b>1058</b>	<b>29</b>
%	2.5	2.5	1.2	51.9	24.7	17.3	100	-	-	35.8

Table 1. Total number of worked flints recovered (excluding two chips), by context group

## **Condition**

Most of the recovered flintwork is in good condition, and of the six pieces with some degree of surface weathering, three were collected as unstratified items. Twenty-nine struck flints are also burnt, including 20 from tree-throw 529, comprising 46% of the lithics from this context, which in addition produced 191 calcined flints.

Almost half of the assemblage is comprised of flake and blade fragments, with 24 and 16 examples respectively. Flake and blade fragmentation within context 529, representing 61% of all flints from that context, mirrors the high proportion (at 57%) of similar material retrieved from the Mesolithic contexts sampled in 2011, and is probably attributable to similar chronological and taphonomic factors.

## **Raw material**

Most of the worked lithics have been produced from good quality mottled grey or black flint with off-white to buff cortex, ultimately deriving from chalk flint or Clay-with-Flints outcrops. Seven flints, six of which were collected as unstratified items, derive from poorer quality 'head' type deposits, usually mineral stained orange-brown, with waterworn and sometimes pitted cortex, which is more prone to thermal flaws.

## **Technology: cores and debitage**

Only two cores were recovered, comprising one each from tree-throws 541 and 548. Both have been used to produce flakes, are partly keeled, and have been manufactured on chalk-derived flint of quite good quality. Hard hammer impact scars are visible on both. They are likely to date to the Late Neolithic or Early Bronze Age periods. Two flakes from context 548 may well derive from the same core.

A proportion of other flakes from the site may also be of Neolithic or Bronze Age date, but all but one of the lithics from tree-throw hollow 529 can be more readily accommodated within the Mesolithic period, in view of the high proportion of blades (four examples) and blade fragments (13, including two re-fits) present, which together constitute 39% of the feature assemblage. This aspect of the flintwork, together with the high proportions of broken blanks and burnt pieces recovered noted above, mirror similar figures recorded for the lithic material deriving from a group of Mesolithic tree-throw hollows excavated further east, close to the junction of the Folkestone Beds and Gault Clay geologies (Marples 2012). A burnt crested blade fragment provides additional evidence of the assemblage's likely Mesolithic origin. The only element not in keeping with this proposed dating is an irregular fragment of thermally flawed 'head' type flint bearing the truncated scar of a hinge terminated removal on one surface, which is likely to be of later Bronze Age origin. In keeping with all of the tree-throw hollows previously excavated at North Park Farm, the flints from this feature were distributed throughout its fill, and nearly equivalent numbers were recovered from both its northern and southern excavated halves.

## **Technology: tools**

Fourteen implements have been identified, although this total includes four edge-modified pieces with small areas of light retouch, the origin of which may be of incidental origin and is not

necessarily use related. Of the remainder, the earliest piece is a pick manufactured on a sausage-shaped nodule, subsequently re-flaked using a hard hammerstone. This feature is evident from the incipient cones of percussion indicating miss-hits, which are located adjacent to two very deep flake scars clearly truncating the implement's iron stained worked facets. These removals may have been intended to sharpen, or thin, the implement's working end, or for use as blanks in their own right. The main lateral edge of the pick has been 'turned; ie flaked along one edge and then along the other, rather than flaked alternately. Picks are a typical Mesolithic tool type, but they were also produced in the Early Neolithic period (Butler 2005, 132).

All of the other classified tools are of later Bronze Age character. They include a multi-platform flake core with numerous hard hammer miss-hits and two small notches, one of which may have been functionally related, a possible combination piercing/scraping tool produced on a core shatter fragment, two thick flakes with pronounced bulbs of percussion and continuous areas of retouch along their right lateral margins, and a piercer and a denticulate, both produced on natural flakes. All of these pieces have been manufactured from poorer quality, readily available 'head' type flint, which is usually mineral stained.

## **Discussion**

Although the worked flint assemblage deriving from the NPQ 11 excavation represents the smallest such collection of lithics associated with large-scale archaeological investigations at North Park Farm to date, the material does, nevertheless, provide two points of interest. Although largely devoid of features, the area of clay solifluction deposits at the northern end of the site did produce a small number of clearly identifiable later Bronze Age implements, most of which were in good condition, suggesting that they may well have been recovered close to their original places of discard. Fewer comparable pieces of Bronze Age date were retrieved from palaeochannel deposits sampled just to the east of the area of the latest excavations, which were largely characterized by irregular flint-knapping waste. Similar tools were, however, recovered from a number of pits investigated even further east in 2009, some of which produced Bronze Age pottery (Marples 2009). The latest finds could, therefore, represent a residue of 'off-site' activity in an area clearly unsuited to occupation, which, to judge by the robust character of the pieces themselves, and their edge morphology, may relate to the working of hard contact materials.

Secondly, the presence of Mesolithic flintwork, much of it burnt and fragmented, within a tree-throw hollow located on the Folkestone Beds Greensand just to the south of the solifluction clay substrate, parallels many similar findings made in the course of investigations further east in 2001, 2009 and 2011 (Hayman forthcoming; Jones 2009; Jones 2012).

## **THE POTTERY** *by Phil Jones*

Only 28 sherds were recovered from the larger, western part of the site, of which all but three are of Bronze Age type. The exceptions are body sherds of early medieval shelly S2 ware from buried soil 561 in the gully/posthole complex by the southern baulk. In the same fabric is the complete profile of a relatively tall cooking pot/jar that was recovered as a single sherd, plus others from the rim, from the upper fill of gully 359 in the bridleway strip (fig 5). The vessel was hand-made and has a simple everted and wheel-turned rim, and the sharp internal angle of the collar and body junction suggests a relatively early date within the long period of production of this ware. It could be contemporary with, or earlier than, the late 11th or early 12th century

settlement that was found c100m distant by Place Farm Road in the 2005 excavations within the quarry. Sooting still present on its exterior suggests that it had been used to cook food or liquids in the vicinity of the gully.

All but one of the Bronze Age sherds came from four of the features in the south-west corner of the site and are in the calcined flint-gritted fabric CALC 1, with no other obviously added inclusions. The exception is a small, residual body sherd from medieval gully 562. Two more body sherds were recovered from tree-throw 509, and pit 525 yielded a slightly everted, upright rim of a jar form. Four more sherds from pit 539 include the upright rim of another jar that has a rounded shoulder angle, suggesting that it is from either a biconical form of Early Bronze Age type, or a later Bronze Age shouldered jar. The largest assemblage is of 17 sherds from pit 548B that had formed within, or been dug through, the top of tree-throw fill 548A. All are body sherds, including one very large fragment of a jar from close to the base of the feature that retains an internal residue. The feature also contained four struck flints of Neolithic or Early Bronze Age type and four burnt flints.

What part of the Bronze Age these sherds belong to remains uncertain, with two rims that could be early or late within the period, but much of the flintwork suggests an earlier dating. The residue on the large sherd from 548A would provide a more precise dating for the last usage of that vessel, and the charcoal fragments from the cremation pits could establish whether they had been contemporary.

#### **OTHER FINDS** *by Phil Jones*

Most of the other recorded finds are calcined flints, with 221 (0.7kg) from thirteen of the south-western features, but with most (191 examples; 0.5kg) from tree-throw 529 in association with sixteen struck flints of Mesolithic type, four of which are also burnt. Much of the fill of hearth pit 358 in the bridleway strip comprised burnt flints, but they were not quantified. The hearth stones within pit 533 had been of ferruginous sandstone from the Folkestone Beds, but had also not been quantified. Two pieces of Upper Greensand (53g and 194g) were found in possible posthole 546 in association with seven struck flints of Neolithic or Early Bronze Age type, but neither fragment shows any signs of having been worked. The only bone from the site was a single shattered piece from gully 562 of the southern early medieval complex, and a medieval or later roof tile fragment was retrieved from tree-throw 512.

#### **CHARCOAL ASSESSMENT** *by Lucy Allott*

##### **Introduction**

This report summarises the findings of an assessment of wood charcoal fragments from the fills of nine pits (12 samples) excavated at North Park Quarry (NPQ11). The majority of charcoal within these deposits was associated with cremation activities, and assessment has confirmed the presence of cremated human bone in six of the deposits with a further context containing unidentifiable cremated bone (Sibun pers comm).

The assessment aims to characterise the charcoal assemblage, recording quantities preserved and quality of preservation as well as providing an initial indication of the woody taxa present.

## Methodology

Charcoal samples were weighed and quantified (table 3) and ten fragments >2mm in size were extracted from each context for identification. The fragments were fractured along three planes (transverse, tangential longitudinal and radial longitudinal sections) following standardised procedures and viewed under a stereozoom microscope for initial sorting and an incident light microscope (at 50, 100, 200 and 500x) for identification.

Taxa have been identified through comparison with modern reference material and reference texts (Hather 2000, Schochet *al.* 2004, Schweingruber 1990). Habitat information and nomenclature used follows Stace (1997).

## Results

Table 3 summarises the results of the assessment. Assemblages varied in size from <2g to 30g and displayed variable preservation. Much of the assemblage consisted of highly comminuted fragments measuring 2-4mm in size with smaller amounts of charcoal >4mm present. Very few intact pieces of roundwood or roundwood fragments were noted and, based on growth ring curvature, the majority of the charcoal appears to derive from specimens with moderately large diameters.

Oak (*Quercus* sp.) and wild cherry/blackthorn (*Prunus* sp.) were the only taxa recorded in samples containing cremated human bone. Although taxonomic identifications were obtained for each context, identifications were limited for pits 522 and 523, both of which produced very small assemblages of charcoal consisting primarily of small, poorly preserved fragments. Several of the oak fragments from 523 (sample <9>) are vitrified, which may be indicative of charring at high temperatures. A fruit stone fragment of probable blackthorn (*Prunus* cf. *spinosa*) was present in pit 507.

Sample <6> from pit 550, in which cremated (unidentifiable) bone was recorded, also contained oak and wild cherry/blackthorn as well as a single fragment of possible heather (cf. *Calluna vulgaris*) twig/roundwood.

A slightly broader range of taxa was recorded in the three samples; <5>, from 525, <15>, from 548 and <16> from 561. In addition to oak and wild cherry/blackthorn, hazel (*Corylus avellana*), hawthorn/apple group taxa (cf. Maloideae), willow/poplar (*Salix/Populus* sp.) and possible wild privet (cf. *Ligustrum* sp.) were also recorded.

## Potential

Each of the samples contained identifiable charcoal, but due to variations in preservation and quantities of charcoal present only five of the nine deposits contain sufficiently large and well preserved assemblages for further identification and analysis work. Initial assessment suggests that cremated bone assemblages are predominantly associated with oak and cherry/blackthorn charcoal. Both taxa have been recorded in cremations at other sites and it is possible that they were preferentially selected for fuel and timbers used in cremation pyres. The presence of slightly more diverse assemblages in deposits that are not directly associated with human bone is interesting and may imply that the deposits have a range of origins.

Fragments of cherry/blackthorn charcoal from pits 507 and 522 and the probable blackthorn fruit stone fragment from pit 507 could be used, in conjunction with cremated human bone, to provide a dating framework for the cremation deposits at the site.

Features in which cremated human bone was absent also contain charcoal suitable for dating, such as hazel, hawthorn group taxa, willow/poplar, heather or cherry/blackthorn, although the value of dating these deposits will depend upon the type of features represented and their association with the cremation deposits.

**Further work**

Further analysis of charcoal from pits 505, 520, 550, 525 and 561 is recommended to obtain further taxonomic identifications for the largest assemblages. Analysis would examine the evidence for fuel wood selection in relation to funerary activities at the site and aim to characterise the woody vegetation in the site vicinity. Results of the analysis and assessment could then be integrated for publication. Further analysis of samples <5> and <16> is dependent upon further context/feature information.

Table 3: Summary of charcoal assessment data

Context	Sample	Weight g / Quantity (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)	Taxonomic Identifications										Comments		
			<i>Quercus</i> sp.	<i>Prunus</i> sp.	<i>Corylus avellana</i>	cfMaloideae	<i>Salix/Populus</i> sp.	cf <i>Ligustrum</i> sp.	cf. <i>Calluna</i> sp.	Indet bark frags	Indet poor pres	indet twig wood			
505	2, 13	>4mm (8g/**), 2-4mm (12g/****)	10												moderate assemblage remaining, Moderate assemblage, further identifications likely
507	1, 12	2-4mm (<1g/**)		2							3	4	1		
520	3	2-4mm &>4mm (30g/****)	10												Moderate assemblage, further identifications likely
521	7	2-4mm (6g/**)	10												

Context	Sample	Weight g/ Quantity (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)	Taxonomic Identifications								Comments		
			<i>Quercus</i> sp.	<i>Prunus</i> sp.	<i>Corylus avellana</i>	cfMaloideae	<i>Salix/Populus</i> sp.	cf <i>Ligustrum</i> sp.	cf. <i>Calluna</i> sp.	Indet bark frags		Indet poor pres	indet twig wood
522	8	2-4mm (<2g/**)		3									
523	9	2-4mm (<2g/**)	6 (3 vitrified)										
550	6	2-4mm & >4mm (16g/****)	8	1					1				moderate quantity of charcoal remaining, predominantly 2-4mm in size so identifications may be limited however further identifications possible.
525	5	2-4mm & >4mm (6g/***)		6	3	1							small to moderate assemblage remaining, has potential for further identification work
548	15	2-4mm (<2g/**)	8		1		1						
561	16	>4mm (4g/**)	6		3			1					well preserved small-mod assemblage remaining, has potential for further identification work

## THE CREMATED BONE by Lucy Sibun

Cremated human bone was recovered from six pits (505, 507, 520, 521, 522 and 523, and pit 550) contained a very small quantity of unidentifiable cremated bone. The cremation deposits were collected and processed as environmental samples and sieve fractions of <4mm, and 4+mm were presented for assessment.

The assessment was undertaken according to standard guidelines (McKinley 2004). The total of weight of each cremation deposit was established and then examined to record the degree of fragmentation and fragment colour. The presence and weight of fragments from all skeletal areas (skull, axial skeleton, upper limb, lower limb) was noted. The potential of each assemblage to yield demographic or other information was then considered.

Table 4 summarises the results of the analysis. The table includes only those contexts from which identifiable human was recovered but the fragment size totals include both the identifiable and unidentifiable material from these contexts.

Context	Weight (grams)			Total (g)	AGE	SEX	IDENTIFIABLE			
	0-4	5-8	9-20				S	A	U	L
505	13.7	6.5	1.5	21.7	?	?				✓
507	77.2	22.0	17.4	116.6	A	?	✓	✓	✓	
520	50.2	36.7		86.9	?	?	✓	✓	✓	✓
521	5.4			5.4	?	?	✓			
522	2.2			2.2	?	?	✓			
523	3.5			3.5	?	?	✓			

Table 4: Summary results of cremated human bone analysis  
(S= skull, A = axial, U= upper limb, L = lower limb, A = adult)

Only small quantities of cremated bone were recovered from each cremation deposit, ranging from 2.2grams, from pit 522 to 116.6g, from pit 507. From the initial assessment it would appear that each cremation deposit contained the remains of a single individual, with no repeated elements noted.

Due to the high degree of fragmentation and small quantities recovered, fragments enabling age at death to be confidently established were only present in the 507sample, and age assessment was based on fragment size and dental development. No sexually diagnostic fragments were identified in any context and no evidence of pathology was noted.

In all cases the cremation process was highly efficient, with at least 99% of fragments calcined in each case. No animal bone or other intrusive material was noted in the assemblages.

### Potential

Fragments identifiable as human, and to skeletal area or element were recorded in all six contexts, but in some cases only in very small quantities. For this reason it is proposed that only the data from pits 507 and 520 should be studied further. This would enable the degree of fragmentation to be established. The percentage by weight of the fragments from each skeletal

area can also be calculated. It is not thought that further examination of the material will result in more accurate age or sex estimates.

### **Further work**

The analysis results from pits 507 and 520 should be studied in to calculate the degree of fragmentation and the percentages by weight of fragments from each skeletal area. A brief report would summarise and tabulate the results and include data from all six cremations. If the cremations are successfully dated an attempt could be made to compare the results with each other and other burials of the same period, but meaningful comparisons may be limited as a result of the small size of the assemblages (0.75 da).

### **REFERENCES**

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Marples, NJ, 2009 Flintwork in Jones & Marples 2009, 23-35  
Marples, NJ, 2012 The flintwork, in Jones 2012



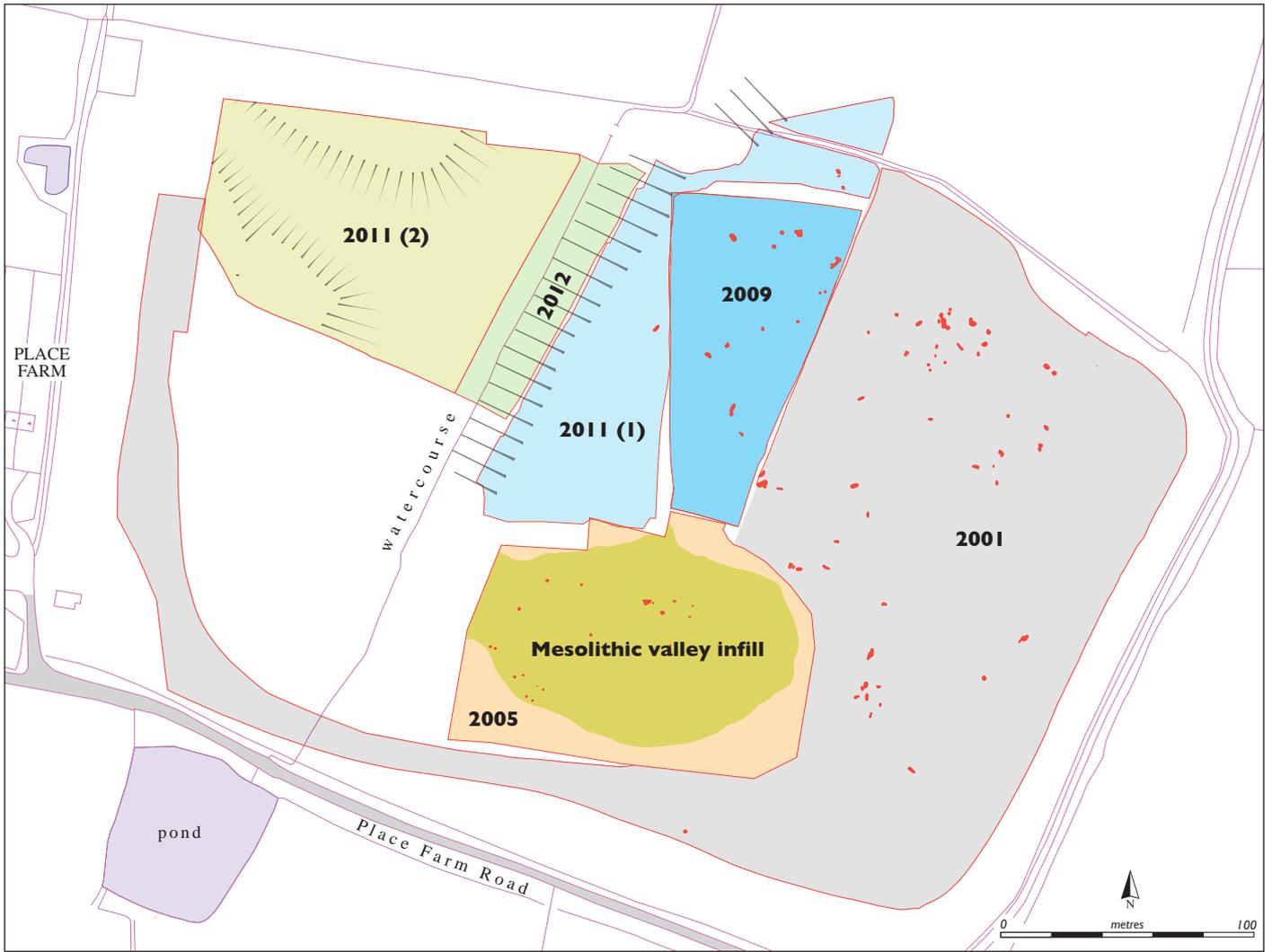


Fig 2 Location of the archaeological work in 2001, 2005, 2009, 2011 (two areas), and 2012 (bridleway strip). The features with Mesolithic evidence are also shown, as are the hachures indicating the edge of the solifluction lobe present over parts of the 2011 and 2012 areas

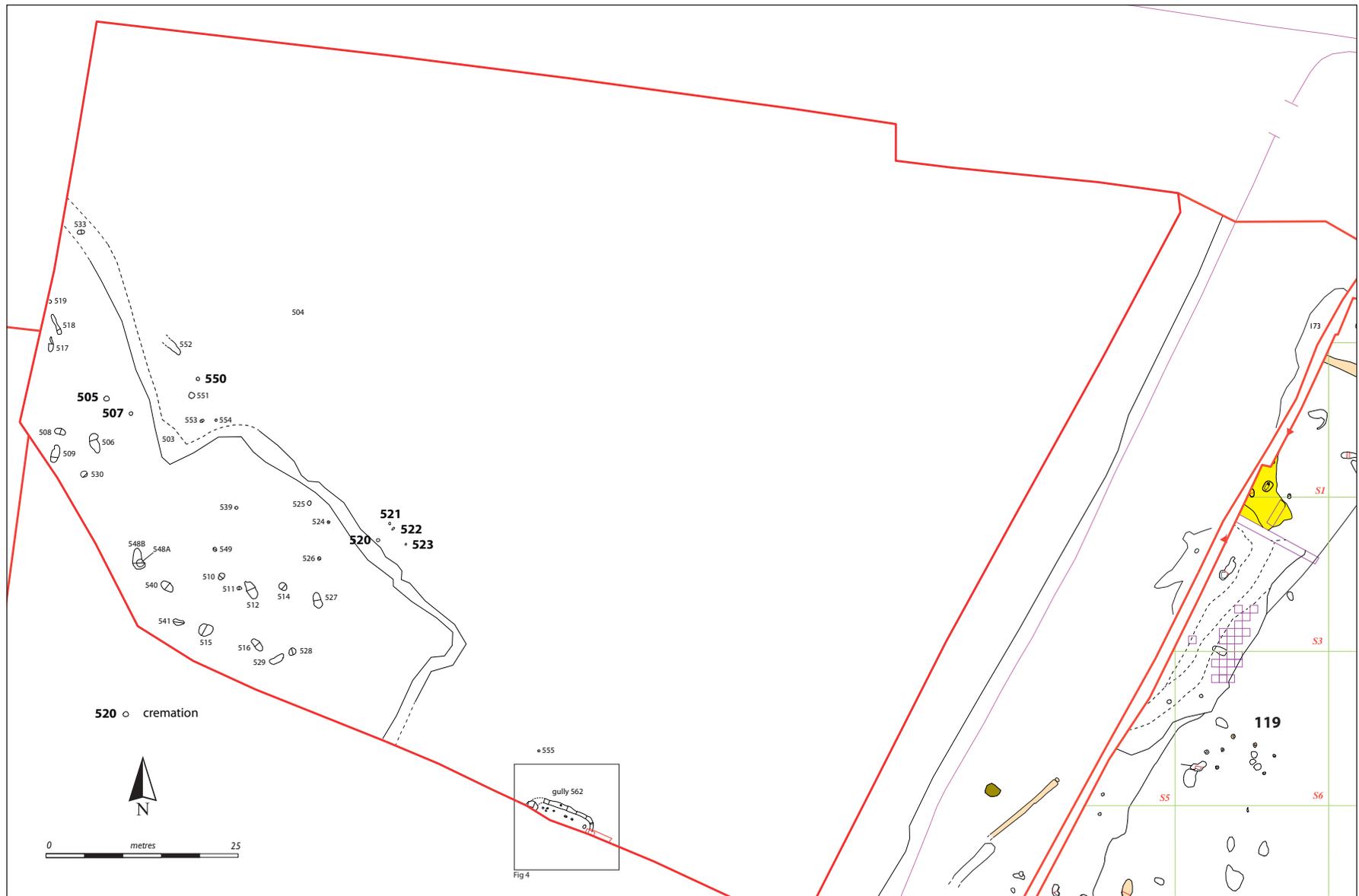


Fig 3 Overall plan of the 2011 (2) and 2012 areas

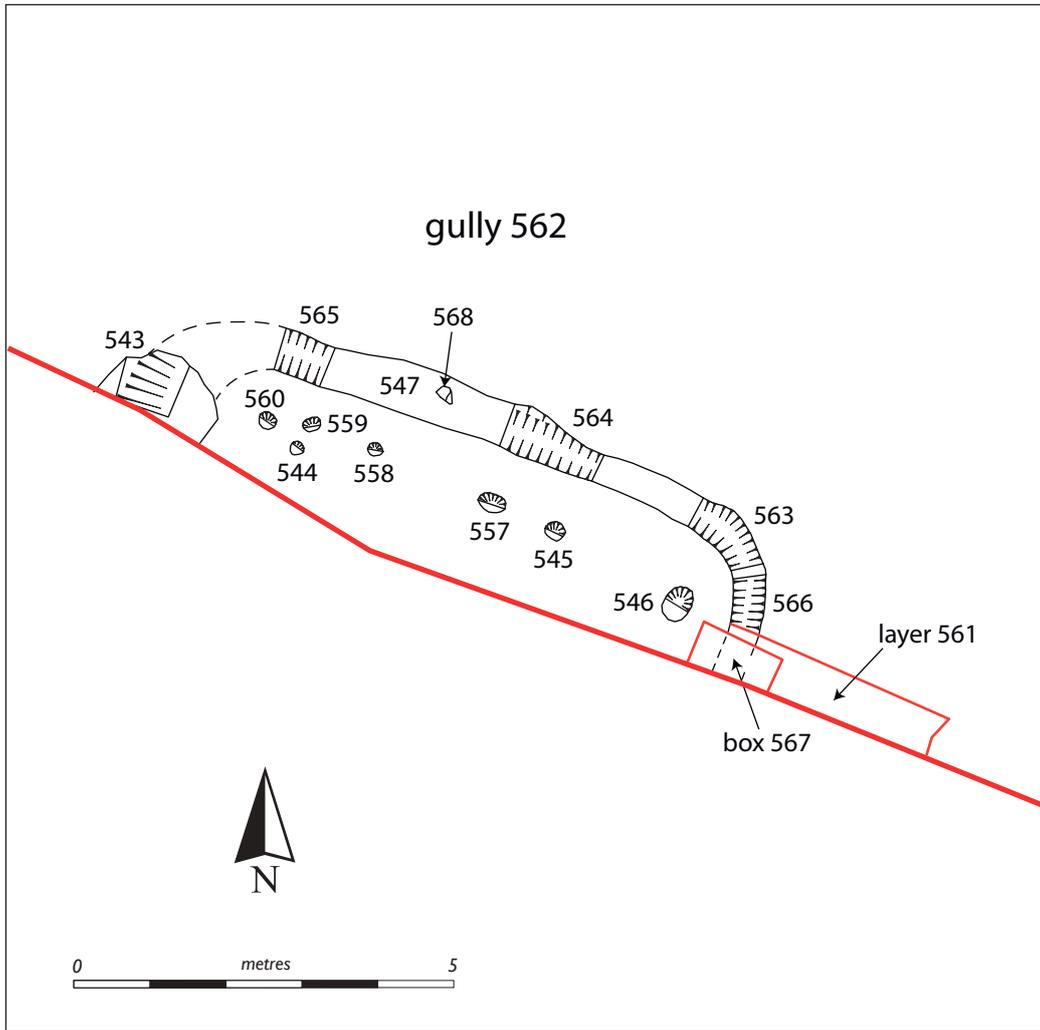


Fig 4 Detail plan of gully 562 in the 2011 (2) area

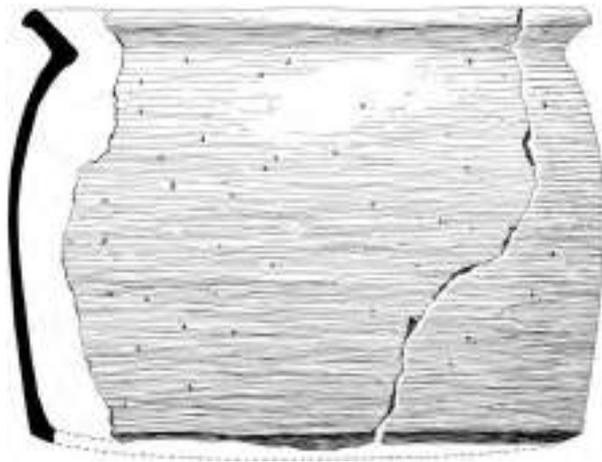


Fig 5 Medieval shelly S2 ware jar from gully 359

Table 2 NPQ 11 All Flintwork

Context				Cores and Debitage							Tools and Tool Waste							Flint type				Condition		Notes					
Context	Type	Flint dates	Loc	Blade	Blade Fragment	Chip	Core	Core Dressing	Flake	Flake Fragment	Irregular Waste	Combination Tool	Core Tool	Denticulate	Edge Modified	Misc Retouched	Notch	Pick	Piercer	Totals	of which Burnt	Weight (g)	Black flint		Chalk flint/clay-with-flints	Head type flint	Mottled grey	Good	Fair
500	Unstratified (topsoil)	Meso	E															1		1		354		1			1		Sausage-shaped nodule with worn cortex- Head? Apparently re-cycled to produce 2 thick flakes, or crude attempt at re-sharpening, with assoc miss-hits
500 Bund	Unstratified	M/Neo							1											1		10	1				1		Mint blade-like tertiary flake with similar removals on its dorsal surface
U/S Near 538	Unstratified	LBA	N											1						1		30		1			1		Blank is a natural flake with one thermal flat surface which has been retouched. Some faint impact blows on striking platform
U/S Between 537 & 538	Unstratified	LBA	N										1						1	2		90		2		1	1		Possible core tool with 2 small notched areas and some slight edge modification, many incips on 3 different platforms. ?Piercer possibly a pseudo artefact made on a natural glossy pebble
U/S E. of 552	Unstratified	LBA	W									1			1					2		133		2		2			Piercer on ?core frag with one possible scraping edge, impact scar & 3 fossil impressions. Thick retouched flake possible point
U/S near Med area	Unstratified	LBA								1						1				2		24		1		1	1		Thick bifacially retouched flake with prominent bulb, incips on ventral & dorsal surfaces, probable edge damage also evident on ventral. Frag sired
U/S N.	Unstratified	M/Neo												1						1		5					1		Bilaterally modified patinated blade. Some mod along one edge may be original, but along one edge this clearly truncates the patination- recycled?
510	Tree-throw	Meso							1											1		12	1				1		Probable thinning flake, patinated and with small ferruginous concretions.
512	Tree-throw	M/Neo								1										1		5	1				1		Patinated flake/blade frag with parallel dorsal arrises & some platform edge abrasion on butt
515		M/Neo			1				2	3										6	2	14	2				6		Very fresh, at least 2 pieces similar to fresh black flint flake from adjacent spoilheap, poss same core. Bl frag from opposed platform core with remnant platform edge abrasion. 1 frag patinated
525	Pit				1				1	1										3	3	9		3		3			All 3 pieces from same core with distinctive red inclusions (occasionally encountered before at NPF). One sired frag with hinged termination, blade frag poss incidental blade
527	Tee-throw									1										1		14				1	1		Irregular flake poss from core tool
529	Tee-throw	Meso	S	4	6	2			2	9						1				24	10	28				2	24		Retouch possibly recent. 1 blade and 1 flake may be related to axe/adze manufacture. 3 pieces patinated
529S.	Tree-throw	Meso, LBA	S		7			1	6	5	1									20	10	52		1		20			2 re-fitting burnt blade fragments, irreg waste definitely, and 2/3 flakes possibly, LBA. Dressing is burnt crested blade fragment
539		LBA								1										1		47					1		Dubious
541	Tree-throw	Neo/EBA			1		1													2	1	95				1	2		Core (94g) is a partly keeled multi-platform flake type, with miss-hits visible on two, little remnant cortex. Blade frag retains evidence of prior platform edge abrasion
545										1										1		5					1		
546		Neo/EBA							2	2					2	1				7	2	62					7		Mineral stained orange-red, greenish-red or green-black. Retouched flake has circular impact scar on butt, one modified piece has burin spalls truncated by break
548	Tree-throw	Neo/EBA					1		2						1					4		66		4			4		Core (44g) has one partly joint platform with impact scars & thick chalky cortex. Both flakes (one squat proportioned) could derive from the core.
558															1					1		2					1		Fragment of a retouched artefact
563										1										1	1	1					1		
				<b>Total</b>	<b>4</b>	<b>16</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>18</b>	<b>24</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>83</b>	<b>29</b>	<b>1058</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>77</b>	<b>6</b>	
				<b>%</b>	<b>4.8</b>	<b>19.3</b>	<b>2.4</b>	<b>2.4</b>	<b>1.2</b>	<b>21.7</b>	<b>28.9</b>	<b>2.4</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>4.8</b>	<b>6</b>	<b>1.2</b>	<b>1.2</b>	<b>99.9</b>	<b>34.9</b>	<b>105.8</b>	<b>13</b>	<b>41.7</b>	<b>29.2</b>	<b>16.7</b>	<b>93</b>	<b>7.2</b>	