Excavations at Fin Cop, Derbyshire: An Iron Age Hillfort in Conflict?

CLIVE WADDINGTON

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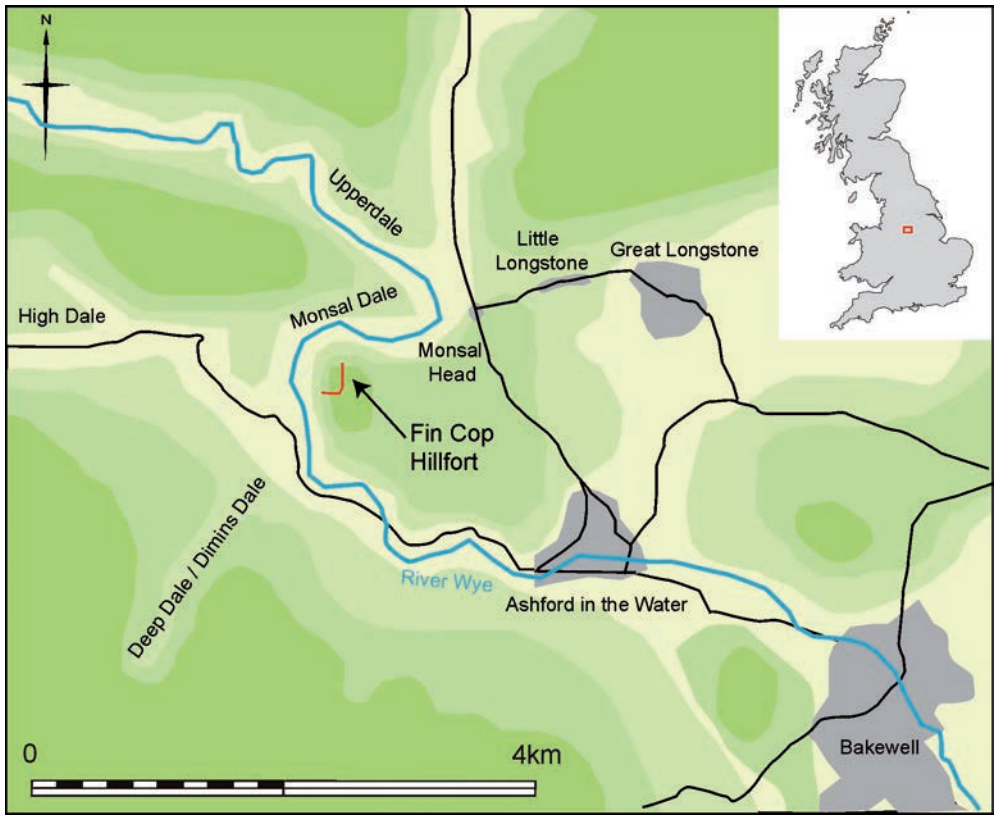
A programme of archaeological investigation took place on Fin Cop hillfort, in the Derbyshire Peak District, during the summers of 2009 and 2010. In total fifty test-pits and eight trenches were excavated, revealing evidence for a Mesolithic quarry site, and sporadic evidence for Neolithic and Beaker period activity. An assemblage of Late Bronze Age-Early Iron Age ceramics was recovered from the interior of the fort in association with rock-cut pits testifying to occupation of the hilltop prior to the construction of the hillfort rampart. The hillfort rampart construction took place in the period 435–390 cal. BC (68% probability) and was destroyed before its completion, probably by the mid-fourth century cal. BC, when large numbers of women and children were disposed of in the ditch together with the demolition material from the fort's wall. The defensive character of the monument and the evidence for a violent end to the site appear to indicate, on current evidence, that the fort was sacked.

BACKGROUND

Fin Cop is the name given to the summit of a prominent hilltop and its crowning hillfort located at SK 174710 on Carboniferous Limestone bedrock that rises to 330 m above Ordnance Datum, approximately 5 km north-west of Bakewell (Illus. 1). The River Wye occupies the deep, steep-sided valley that curves around Fin Cop on three sides. Known locally as 'Monsal Dale' this dramatic valley adds considerably to the site's defensibility (Illus. 2). The hillforts of the Peak District are poorly understood and only Mam Tor (Coombs and Thompson 1979) and Gardom's Edge (Barnatt et al. 2001; 2002) have experienced investigation in modern times. The investigation of Fin Cop was intended to address this gap in our knowledge whilst also providing a robust evidence-base for the future conservation and management of the site. All the archive reports can be accessed online (www.archaeologicalresearchservices.com/projects/fin-cop-hillfort).

PREVIOUS WORK

Prior to this study, three excavations upon, and adjacent to, the site are known, although there may have been unrecorded small-scale antiquarian investigations. The



ILLUS. 1 Map showing the location of Fin Cop

first reported excavation was of a 'bowl barrow' by the late eighteenth-century antiquary, Hayman Rooke; the site of this dig can still be traced on the ground (Illus. 3). Rooke's excavation was a reaction to the tenant farmer being '... induced to destroy a large barrow, for the sake of procuring a great quantity of lime-stones, of which it was chiefly formed' (Rooke 1796, 327). The barrow was originally 'one hundred and sixty one feet'(49m) in circumference (Rooke 1796, 328), making it roughly 15.6m in diameter. The cairn contained two cists, each containing an inhumation, together with three cremations in Bronze Age vessels and an assemblage of associated flint tools. The denuded remains of the 'bowl barrow' can still be observed close to the highest part of the hill and further cairns may have existed on the crest of the hill over which a dry-stone wall now runs. At the time of its excavation it was 'raised to a considerable height' (Rooke 1796, 328) indicating that the cairn must have been a prominent feature when the hillfort was constructed.

In the early twentieth century, a local antiquarian, Major Harris, excavated a cairn on Fin Cop which yielded remains of more than thirty human inhumations. The only published account of the excavations is from a small article in the *High Peak News*

ILLUS. 2 Aerial view of Fin Cop showing the dramatic setting of the site and its strategic location overlooking the confluence of three valleys

(Harris 1925), but the original excavation records have now been located (Mike Plant pers. comm.). According to the article, the cairn was 'situated on a shoulder of Fin Cop, overlooking the Bakewell-Buxton road, [and was] ... surrounded by a wall and crowned with a ring of trees' (Harris 1925, 6). This is a different cairn to the one excavated by Rooke and is located lower down the southern flank of the hill on a shoulder looking towards Great Shacklow Woods.

More recently, a small evaluation trench was placed across a ditch and bank feature downslope from the fort (Wilson and English 1998) but no dating evidence was recovered. The excavators' suggestion that this feature could have been associated with the hillfort seems unlikely because the ditch is uphill of the bank on what would be its 'inner' side. Rather, this feature could be associated with the limits of cultivated land in the medieval or post-medieval periods, with the ditch constructed to keep livestock on the higher grazing land and out of the lower, cultivated ground.

An assemblage of flints was collected from the ground surface of the interior of the hillfort when it was deeply ploughed in the 1940s. Now in the Weston Park Museum, Sheffield (acc. nos 1993.6–7), the collection includes several diagnostic Mesolithic pieces including two end scrapers. Some pieces are Late Neolithic-Early Bronze Age in date, including a transverse arrowhead and thumbnail scraper and a bifacially

worked flint knife made on high quality dark grey/black flint. A small assemblage of thirteen lithics, including a fine scraper, was recovered upslope from the bank in unstratified contexts (Wilson and English 1998).

A basic survey of the hillfort was published by Hart (1981, 74) and this was subsequently enhanced by the plan published by Wilson and English (1998). As part of the 2009–10 study, a detailed earthwork survey (Burn and Brightman 2009) and a geophysical survey (Smalley 2009) were undertaken.

An old green lane approaches the fort on its south and eastern sides and this is known today as Pennyunk Lane. Brotherton (2005) has recognized the Britonic first element 'Penn' in this name, meaning 'head, top, end or promontory'. The second element 'yunk' is probably an ancestor to the Middle Welsh '*ieuanc*', and its Middle Cornish ('*yowynk*') and Middle Breton ('*youanc*') cognates, meaning 'young man or youth' (Brotherton 2005, 102). This leads him to translate this name as something akin to 'Headland of Youth', although something along the lines of 'Hill of the Young' is also possible. This name provides a tantalizing glimpse of what the Late Iron Age name for the hillfort may have been and the associations people attributed to the hilltop.

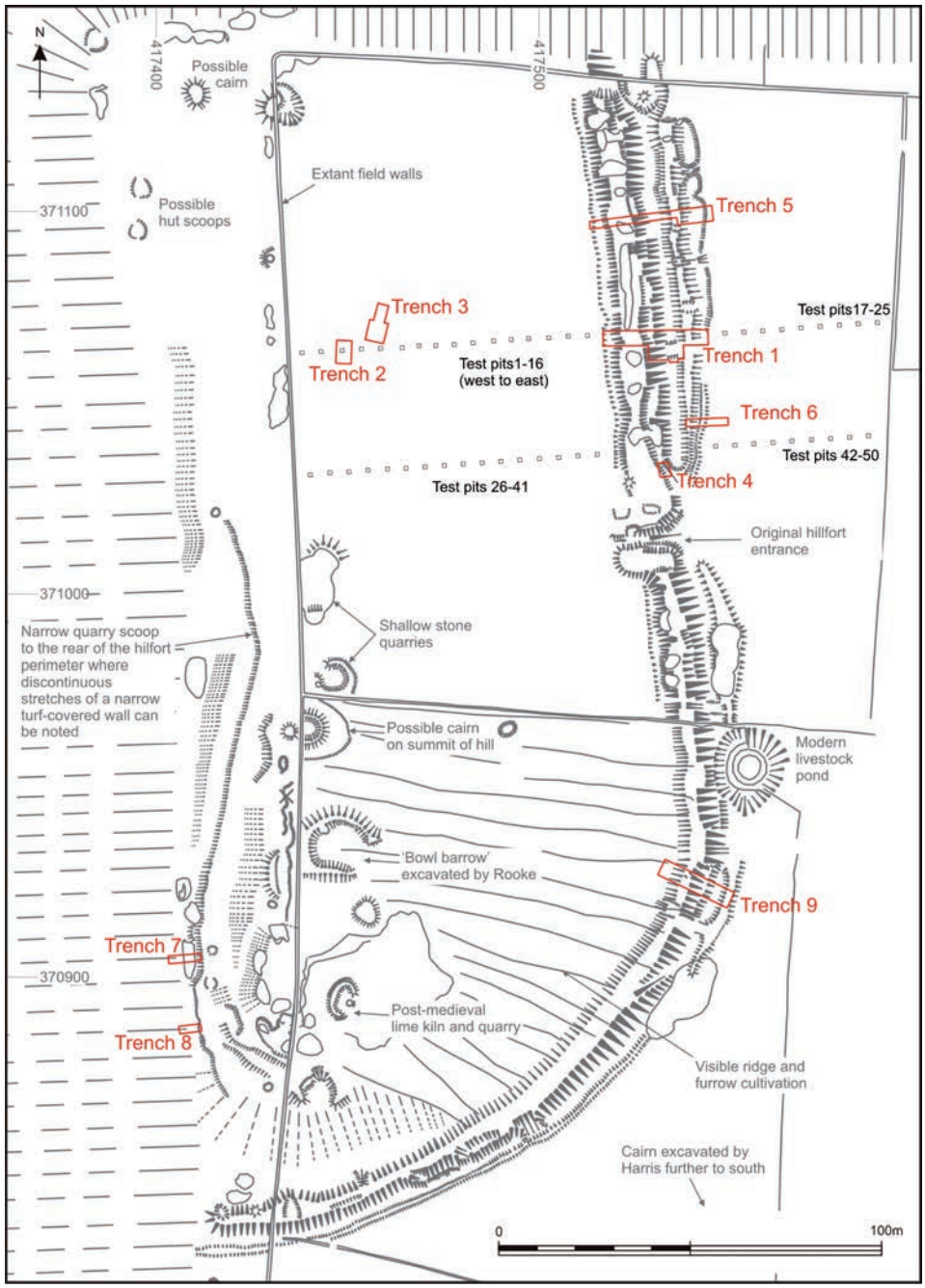
ORGANIZATION AND AIMS

Excavations took place at Fin Cop over a three-week period during July and August 2009 and over a five-week period during July and August 2010. Over the course of the fieldwork, staff from Archaeological Research Services Ltd were assisted by more than eighty volunteers and 450 school children under the auspices of Longstone Local History Group. The work aimed to:

- Establish the form of the enclosure
- Test whether the site really was a 'fort' or some other kind of enclosure
- Determine the chronology of the site
- Establish the condition of preservation of the fort remains and its interior
- Provide participation and training opportunities for the local community, schools and students

SITE DESCRIPTION

The site is located on the crest of a steep sided bluff around the 330m contour with steep scarps dropping off over 170m to the floor of the deeply incised valley known as Monsal Dale. It commands panoramic views in all directions and the other Peak District hillforts at Ball Cross to the east-south-east and Burr Tor to the north are visible. The Carboniferous Limestone bedrock has given rise to base-rich fertile soils known as Wetton 1 which are typical humic rankers. These consist of very shallow loamy upland soils over limestone which are mostly humose and sometimes calcareous (Soil Survey of England and Wales, Sheet 3 Midland and Western England), and have been cultivated since the Neolithic. The depth of soil cover over the site varies considerably and this is discussed further below. Although springs occur across the limestone plateau the closest major supply of fresh running water is the relatively fast-flowing River Wye which snakes along the floor of Monsal Dale to the north and



ILLUS. 3 Earthwork survey of Fin Cop showing the location of the test-pits and excavation trenches

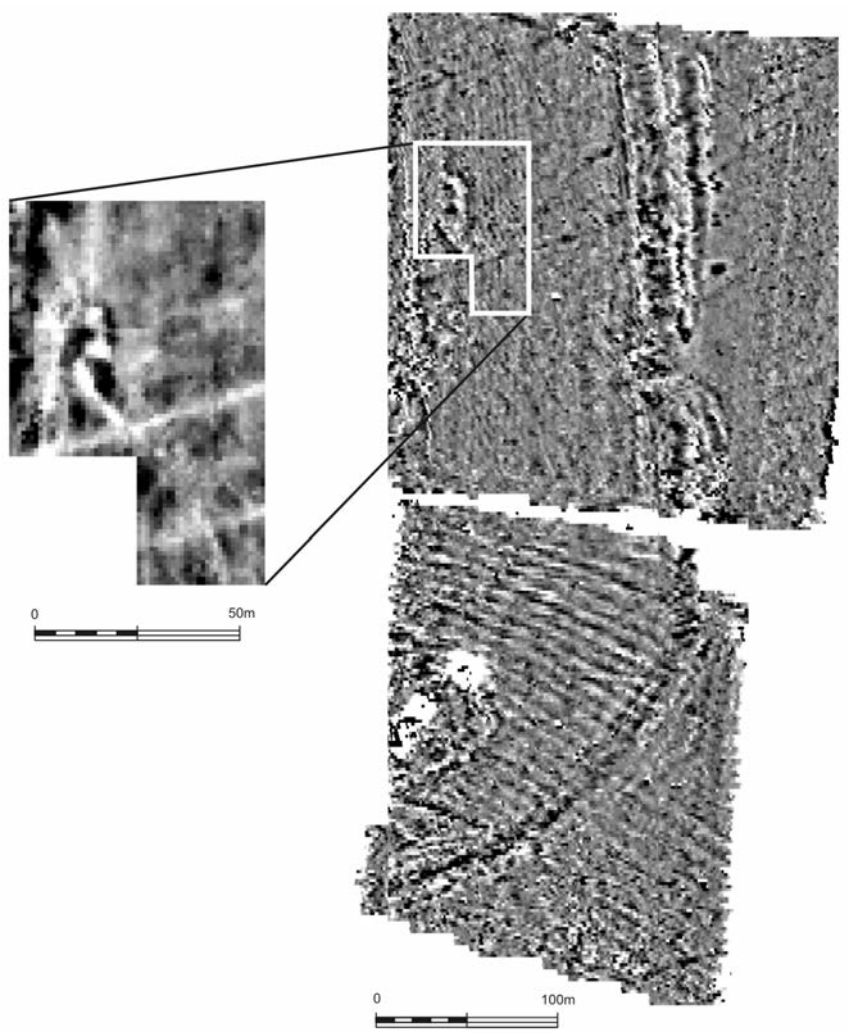
west of the site. However, a spring line or perched water table occurs *c.* 150m downslope of the hillfort on its eastern approach, and this is unlikely to have changed since the Iron Age.

The visible remains of the fort comprise a continuous bank and ditch rampart which define a scarp-edge enclosure, with a short section of a second bank and ditch at the north end of the east side of the circuit forming an area of bivallate defences (Illus. 3). Although now turf-covered, the main bank was originally a stone wall with material now spread beyond its front and rear faces; the ditch is rock-cut. The hillfort wall remains have been heavily robbed for stone in the past. Likely uses were for feeding the limekiln in the southern half of the fort interior for the liming of fields and the construction of the dry-stone field walls as part of the enclosure of common land that is recorded for this area in the late eighteenth century. The faint trace of a possible perimeter wall running along the western scarp edge shows on some aerial photographs (see excavation report below). Some possible hut scoops are visible on the west side of the fort beyond the recent dry stone wall. A cluster of robbed out Beaker or Early Bronze Age stone cairns is situated around the highest point on the hilltop (Barnatt and Collis 1996; see above) where their visibility from below would have been maximized for those traversing Monsal Dale itself, approaching from the east or from other local high points such as Longstone Edge. There may be some additional cairns towards the north-west corner of the hilltop still within the area defined by the hillfort circuit as indicated by ephemeral surface remains. Other surface remains visible on the site include a well-preserved post-medieval limestone quarry containing a lime kiln in the southern half of the fort.

GEOPHYSICAL SURVEY

Detailed gradiometry and earth resistance survey were employed on the site as a rapid and efficient method for collecting comparative data sets (Illus. 4). The gradiometer survey, undertaken over 4 ha, identified a number of anomalies of archaeological and possible archaeological origin. Positive linear anomalies (1) that have been identified throughout the survey area are interpreted as cut features such as ditches. Similar anomalies (2) can be identified which correlate with the existing earthworks within the survey area. Positive linear anomalies of an agricultural origin (3) are also evident, particularly in the southern area. Discrete positive anomalies (4) have been interpreted as pits of possible archaeological origin. Negative anomalies, representing former banks or earthworks, are particularly noticeable over the earthworks which run through the survey area (5). Two negative linear anomalies (6) in the eastern and western limits of the site may relate to field drains. Magnetic debris was often found in quarried areas. An area of possible thermo-remnant response (7) within a quarrying zone in the south-western area is no doubt related to the former lime kiln which survives as an upstanding structure.

The resistance survey focused on the north of the survey area where anomalies were identified in the gradiometer data. High resistance linear and area anomalies may indicate the presence of buried structural debris. Areas of weaker high resistance, as identified in the north-eastern part of the survey area, may indicate compacted earth.



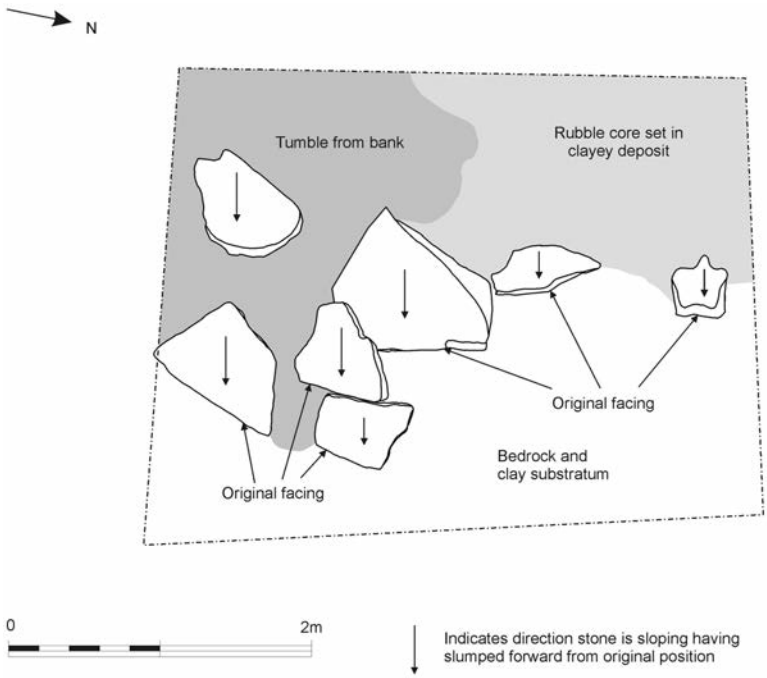
ILLUS. 4 Gradiometer and resistance surveys of Fin Cop

A linear arrangement of high resistance seems to correlate well with the position of a drain on the western limits. Low resistance anomalies represent cut features of possible archaeological origin such as pits or ditches.

There is a good correlation between the two data sets employed on the site with areas of low resistance being identified in the same location as positive anomalies in the gradiometer data. The southern half of the survey area has not yielded as many features of a possible archaeological origin, probably because of the more intensive agricultural activity that has taken place here.

FIELD METHODOLOGY

The field methods for investigating the site comprised two methods: test-pits and excavation trenches (Illus. 3). Fifty, one metre-square, test-pits were excavated in two transects across the hillfort interior and beyond, up to the modern field wall on the east side of the monument. Eight trenches were excavated on the hillfort, and a ninth has been excavated across the rampart in the southern half of the site in a subsequent field season (see Illus. 3 and Postscript below). All were positioned to examine the hillfort rather than the cairns as the latter were not the subject of this investigation. Trenches 1 and 4–9 were positioned across the ramparts, or suspected ramparts, of the hillfort. Trench 1 was excavated over two seasons as adjoining sections, hence reference to Trenches 1a and 1b (Illus. 10). Trench 4 was located to record an area of slumped wall face and Trench 6 was located to test whether the outer bank and ditch continued any further than the upstanding area recorded on the survey. Trenches 7 and 8 were located on the west side of the hillfort to test whether any form of wall or defence had continued around this otherwise naturally defensible side. Trench 9 was located 140m south of Trench 1 over the hillfort ramparts (see Postscript). Trenches 2 and 3 were located in the hillfort interior to test a pottery cluster found in one of the test-pits and to examine a geophysical anomaly. Trench 4 was situated to expose and record an area of eroding wall face for conservation purposes (Illus. 5).



ILLUS. 5 Plan of Trench 4

TEST-PITS

The test-pit (Illus. 8) transects ran parallel in an east-west direction with the aim of establishing:

1. the soil character and depth across the hilltop and the depth at which bedrock was encountered
2. whether artefacts survived in the soil horizons and, if so, their type and broad date range
3. whether sub-surface features survived intact in the interior of the fort

The test-pits were productive, yielding 590 chipped stone artefacts, of which 573 were made from the locally available chert and only seventeen made from flint, brought to the site from outside the region as it is not locally available. In addition to the chipped stone lithics, sixty-six sherds of late prehistoric pottery were recovered from test-pit 3, most of which is typologically attributable to the early first millennium cal. BC (see Beswick this artcle). In addition to the prehistoric pottery, six sherds of post-medieval pot, six clay pipe fragments, fourteen pieces of slag, eight pieces of clinker, four fragments of cinder and six pieces of glass were also retrieved (see Tables 1 and 2 for summaries).

ILLUS. 6 Test-pit 27 showing the thin topsoil immediately overlying limestone bedrock on the higher part of the fort interior

TABLE 1 Summary of test pit finds.

Test pit number	No of chert artefacts	No of flint artefacts	Total lithics	Prehistoric pottery	Other
1	17	1	18	0	Slag 4
2	7	0	7	0	Slag 1
3	9	1	10	66	
4	11	2	13	0	
5	19	1	20	0	Burnt limestone 2
6	15	0	15	0	
7	50	0	50	0	Burnt limestone 2
8	29	0	29	0	Glass 1
9	57	0	57	0	
10	43	0	43	0	Slag 2
11	21	0	21	0	
12	21	0	21	0	
13	9	0	9	0	
14	20	0	20	0	
15	8	0	8	0	
16	5	0	5	0	
17	11	0	11	0	Clinker 4
18	15	0	15	0	
19	8	0	8	0	post-medieval pot 1, clinker 4
20	8	0	8	0	post-medieval pot 1, glass 1, cinder 2
21	3	1	4	0	Slag 4, cinder 2
22	15	2	17	0	Slag 1, post medieval pot 1, glass1
23	11	0	11	0	Glass 2
24	8	0	8	0	Clay pipe 1
25	0	2	2	0	post-medieval pot 3
26	1	1	2	0	
27	6	0	6	0	
28	7	1	8	0	Slag 1
29	3	0	3	0	Clay pipe 1
30	16	0	16	0	Glass 1
31	8	0	8	0	

TABLE 1 (continued)

Test pit number	No of chert artefacts	No of flint artefacts	Total lithics	Prehistoric pottery	Other
32	15	0	15	0	
33	13	1	14	0	
34	17	0	17	0	
35	6	0	6	0	
36	1	0	1	0	
37	7	0	7	0	
38	3	0	3	0	
39	0	0	0	0	
40	3	0	3	0	
41	5	0	5	0	
42	5	1	6	0	
43	3	0	3	0	
44	8	2	10	0	
45	6	0	6	0	
46	5	0	5	0	
47	1	0	1	0	
48	7	0	7	0	Clay pipes 2
49	4	0	4	0	Clay pipe 1
50	3	1	4	0	Slag 1, clay pipe 1
Total	573	17	590		

The test-pits revealed an interesting sediment sequence across the site. In some test-pits the turf mat and topsoil layer was thin, measuring just 0.2 m thick, and directly overlay the limestone bedrock (e.g. Illus. 6). The pits with the shallow soil tended to cluster at the west end of the test-pit transect on the higher ground where the bedrock, unsurprisingly, lay closer to the surface. In the other test-pits, toward the lower east end of the transect, the depth of soil was considerably more than had been anticipated (Illus. 7) with the deepest pit, TP40, having a soil depth of 0.57 m. The greater depth here could also be related to the gradual accumulation of soil downslope behind the hillfort rampart. In all the test-pits a distinct topsoil horizon could be identified, characterized by a humic-rich dark soil. In the areas of shallow soil cover this topsoil lay directly on the limestone bedrock, but in areas with a thicker soil cover it overlay a distinct subsoil layer which was easily identified on account of its orange-brown colour, which denotes a ferruginous, or iron-rich, content (see Illus. 7), and this in turn then overlay the bedrock.

TABLE 2 Summary of lithic types by test pit

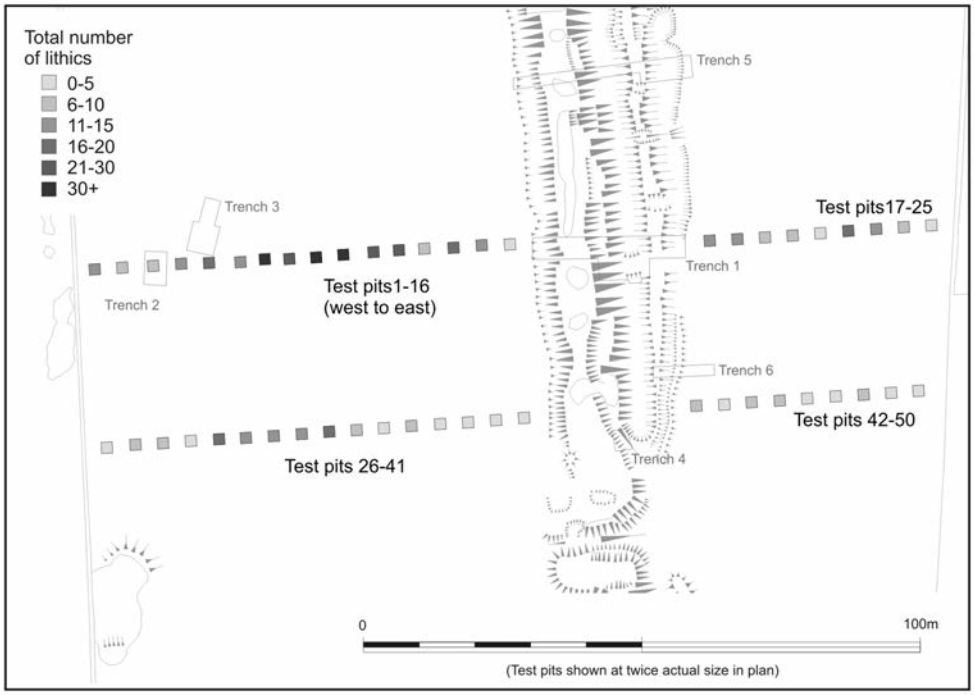
Test pit no	Bashed lumps	Cores	Flakes	Bipolar Flakes	Core rejuvenation flakes	Blades	Retouched flakes	Retouched blades	Edge trimmed flakes	Edge trimmed blades	Utilised flakes	Utilised blades	Scrapers	Microliths	Piercers	Burins	Total
1	0	2	5	0	1	5	0	0	0	3	0	2	0	0	0	0	18
2	0	0	1	1	0	4	0	0	1	0	0	0	0	0	0	0	7
3	0	2	2	0	0	4	0	0	0	1	0	0	1	0	0	0	10
4	0	2	3	0	0	4	0	0	2	2	0	0	0	0	0	0	13
5	0	0	4	0	1	11	0	0	0	2	0	0	0	0	2?	0	20
6	0	1	4	0	0	6	0	0	0	2	2	0	0	0	0	0	15
7	10	9	14	0	2	8	0	0	3	0	1	1	2	0	0	0	50
8	0	3	6	0	0	15	0	0	0	1	1	2	1	0	0	0	29
9	0	3	27	4	1	12	0	0	0	7	2	1	0	0	0	0	57
10	0	3	14	1	0	16	0	1	0	1	4	1	2	0	0	0	43
11	0	2	3	0	0	9	0	1	0	4	1	1	0	0	0	0	21
12	0	1	4	0	2	8	0	0	1	3	0	2	0	0	0	0	21
13	0	1	2	1	0	5	0	0	0	0	0	0	0	0	0	0	9
14	0	0	5	0	0	9	0	0	1	2	0	1	0	1?	0	1?	20
15	0	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	8
16	0	0	1	0	0	3	0	0	0	1	0	0	0	0	0	0	5
17	0	0	2	1	0	7	1	0	0	0	0	0	0	0	0	0	11
18	0	0	4	0	0	11	0	0	0	0	0	0	0	0	0	0	15
19	0	0	5	0	0	3	0	0	0	0	0	0	0	0	0	0	8
20	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
21	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4
22	0	1	7	0	0	8	0	0	0	0	0	1	0	0	0	0	17

23	0	1	7	0	0	3	0	0	0	0	0	0	0	0	0	0	11
24	0	0	2	0	0	4	1	0	0	0	0	0	0	0	1	0	8
25	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
26	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
27	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	6
28	0	0	1	0	1	5	0	0	0	0	1	0	0	0	0	0	8
29	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
30	0	1	7	2	0	6	0	0	0	0	0	0	0	0	0	0	16
31	0	2	0	0	0	4	2	0	0	0	0	0	0	0	0	0	8
32	0	0	6	0	0	7	1	0	0	1	0	0	0	0	0	0	15
33	0	1	3	1	0	7	0	0	1	1	0	0	0	0	0	0	14
34	0	1	9	0	0	7	0	0	0	0	0	0	0	0	0	0	17
35	0	0	2	0	0	1	0	0	0	0	3	0	0	0	0	0	6
36	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
37	0	0	2	0	0	5	0	0	0	0	0	0	0	0	0	0	7
38	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	3
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
41	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	5
42	0	0	4	0	0	1	0	0	0	1	0	0	0	0	0	0	6
43	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	3
44	0	1	4	0	0	4	0	1	0	0	0	0	0	0	0	0	10
45	0	1	1	0	0	2	0	0	0	0	0	0	1	0	1	0	6
46	0	0	1	0	0	2	0	0	0	0	0	0	1	1	0	0	5
47	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
48	0	2	4	0	0	0	0	0	0	0	0	1	0	0	0	0	7
49	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	4
50	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	10	42	192	11	9	223	6	5	9	33	17	16	9	1+1?	1+2?	1+1?	590

ILLUS. 7 Test-pit 12 showing the distinct upper topsoil horizon and the distinct lower subsoil horizon which overlay the limestone bedrock

The test-pits revealed the bedrock surface to be variably weathered and, in some of the pits, chert nodules could be indentified inset within the limestone pavement. Some of the nodules could be easily prized out from the limestone, and had been removed from some pits and split to form large cores. This is interpreted as the remains of shallow chert-winning pits or 'quarrying' for stone tool production. The majority of the lithic finds came from the organic topsoil horizon, or the top 10 mm or so of the orange-brown subsoil horizon, but below that very few lithics were encountered.

Within test-pit 3 sixty-six sherds of Late Bronze Age/Early Iron Age (hereafter LBA/EIA) pottery were found and excavation of a trench around this test-pit revealed evidence for a number of pits and further pottery sherds (see below). A rock-cut post-hole in test-pit 31, 0.15 m in diameter, suggests a post-built timber structure within the interior of the hillfort, but no material suitable for dating was recovered from it. These discoveries provide clear evidence for the survival of a variety of structural features and artefacts within the interior of the hillfort, some of which predate the period of occupation represented by the hillfort, whilst others may be contemporary.



ILLUS. 8 Plan of test-pit locations showing densities of lithic finds per test-pit. Note the concentration of material inside the hillfort on the higher parts of the slope and particularly around pits 7–12 in Transect 1

EXCAVATION

HILLFORT INTERIOR

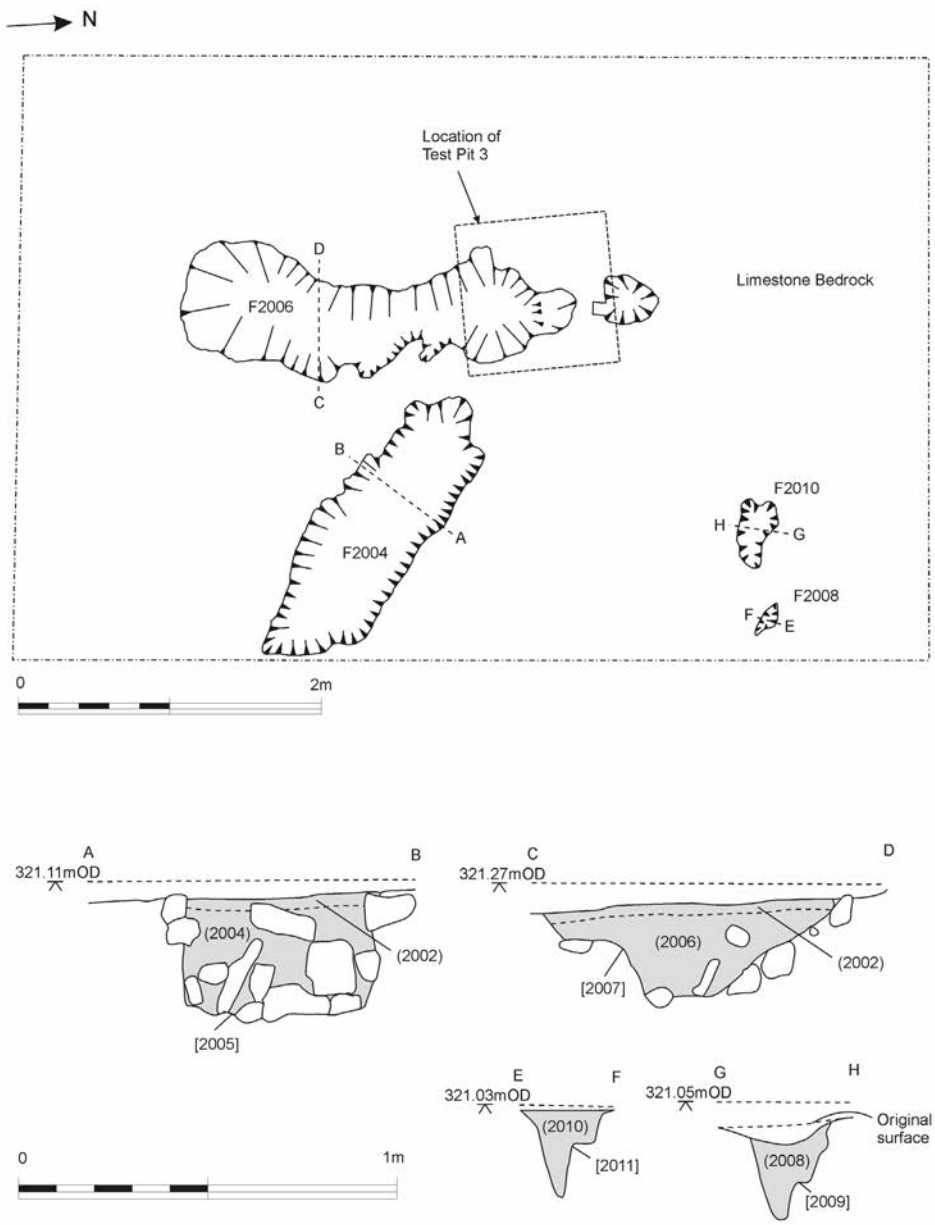
Trench 3 was opened to test an anomaly identified by the geophysical survey. It measured 10 m × 3 m and was widened to 5 m at the southern end in order to investigate what was thought might be a rock-cut feature (Illus 1 and 9). Within Trench 3 the limestone bedrock lay close to the surface, corroborating the evidence observed in the test-pits. Beneath the thin topsoil a ferruginous subsoil deposit, observed across much of the site, sat in the natural clefts and pockets formed by the fractured limestone pavement. Unlike those in Trench 2, which lay close by, none of these appeared anthropogenic in origin.

The 'rock-cut feature' in Trench 3 was found to be a fine example of a natural shake-hole, a solution hollow formed in limestone by the percolation of water mixed with acidic organic residues. Half-sectioning revealed a largely vertical-sided hollow, roughly 3.3 m in diameter, and of an unknown depth as the feature continued beyond the limit of excavation. The fill comprised several layers that could be distinguished by different colouration of a very heavy and compact clay containing thousands of

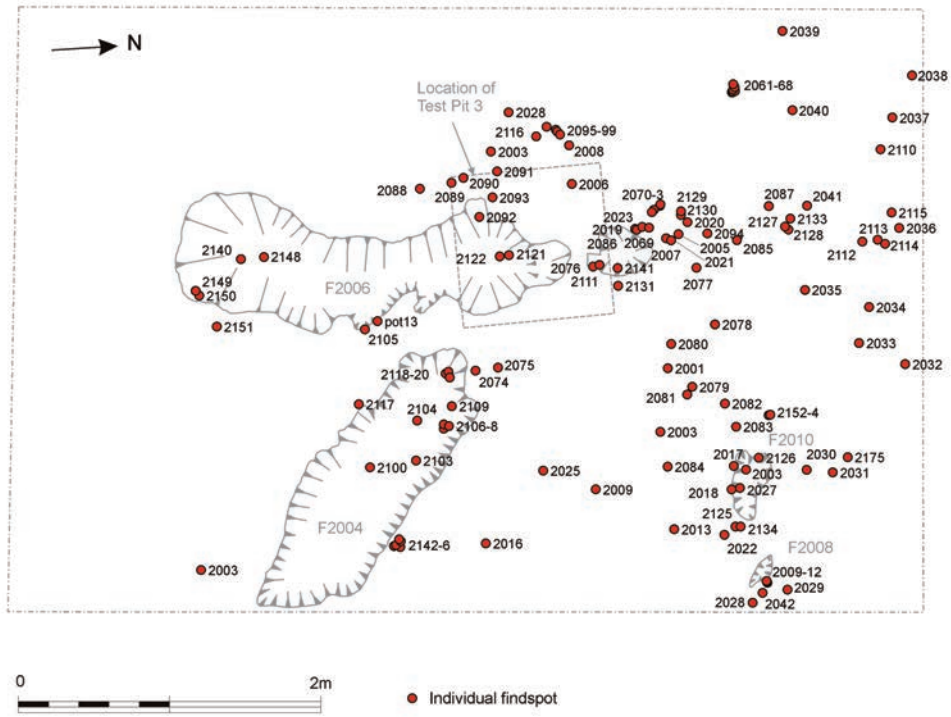
ILLUS. 9 Solution hollow after half-sectioning in Trench 3. Note the naturally weathered walls of the feature and the different episodes of infill

weathered chert flakes, many of which had a regular profile and could easily be mistaken as being man made. In the lower strata of the hollow the chert occurred in much larger nodules and in places the chert still existed in seams within the limestone. The limestone walls of the hollow were heavily weathered. After excavating the feature to a depth of 1.6 m, no evidence of anthropogenic material was encountered, either in the form of artefacts, charred wood or botanical remains, and excavation ceased. A specialist geologist, Professor C. Curtis, confirmed that the feature was a substantial natural shake-hole, in this case accelerated by the differential solubility of Carboniferous Limestone and the naturally occurring chert pockets.

Because test-pit 3 produced so many sherds it was extended to form Trench 2, measuring 6 m × 4 m, which was entirely hand-excavated. This trench, including the initial test-pit, produced 227 pottery fragments from the topsoil together with several pieces of daub and four pit features cut into the bedrock (Illus 10 and 11). The latter included two linear pits, F2004 and F2006, together with two small elongated sockets, F2008 and F2010. Each of these features had a silty fill different from the overlying topsoil horizon and in each case the vertical and smooth sides of the surrounding limestone bedrock contrasted with the more jagged and unsmoothed natural voids and joints that occurred in the limestone pavement elsewhere in the trench. The two large



ILLUS. 10 Plan of Trench 2 showing the various pit features and section drawings through their fills



ILLUS. 11 Plan of Trench 2 showing the distribution of pottery sherds and daub superimposed over the pit features

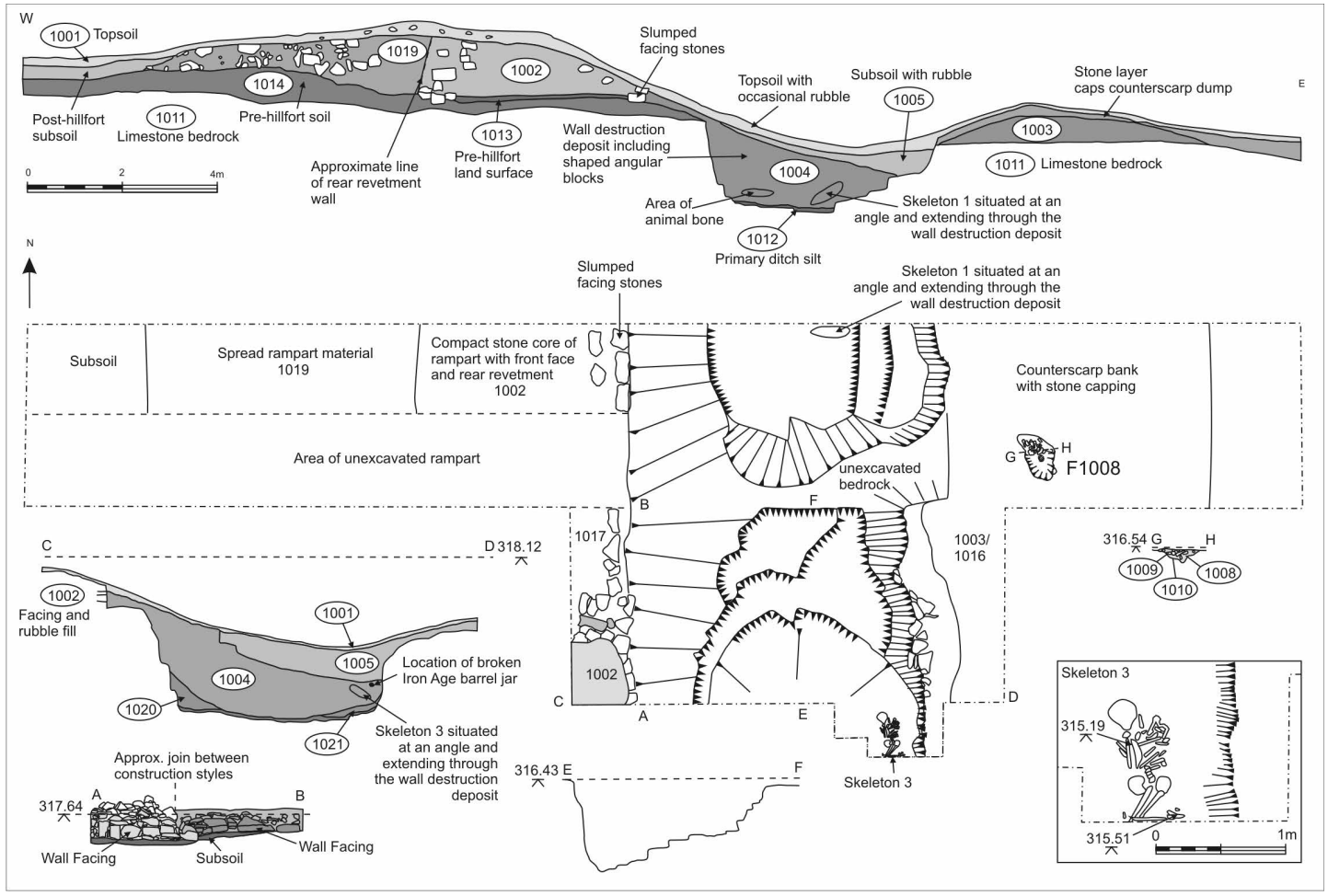
linear pits also contained jumbled limestone cobbles in their fills which were lying at random angles inconsistent with the jointing in the bedrock. Pit F2006 had a flat base and sloping sides with occasional angular limestone blocks in its otherwise dark grey loamy fill. Pit F2004 had vertical regular sides and a flat base and contained a predominantly stony fill composed of angular limestone amongst the dark grey loamy fill. No organic material or samples suitable for radiocarbon dating were recovered from either of these pits. Their use is not clear, but they could have been for storage. The small pits F2008 and F2010, with their steeply sloping sides and narrower shape could perhaps have been structural and may have been associated with the structure suggested by the presence of the daub. Both were filled with a dark grey loamy fill and no material suitable for dating was recovered.

The distribution of the pottery sherds and daub is shown in Illus. 11 where the material appears to be concentrated in the north and central areas of the trench. The pottery, daub and the pit features imply domestic activity and a structure in this area. Two radiocarbon determinations (SUERC-26420–1) from residues on two separate pot sherds provided Late Bronze-Early Iron Age dates (Table 3) demonstrating activity on the site prior to the construction of the hillfort rampart.

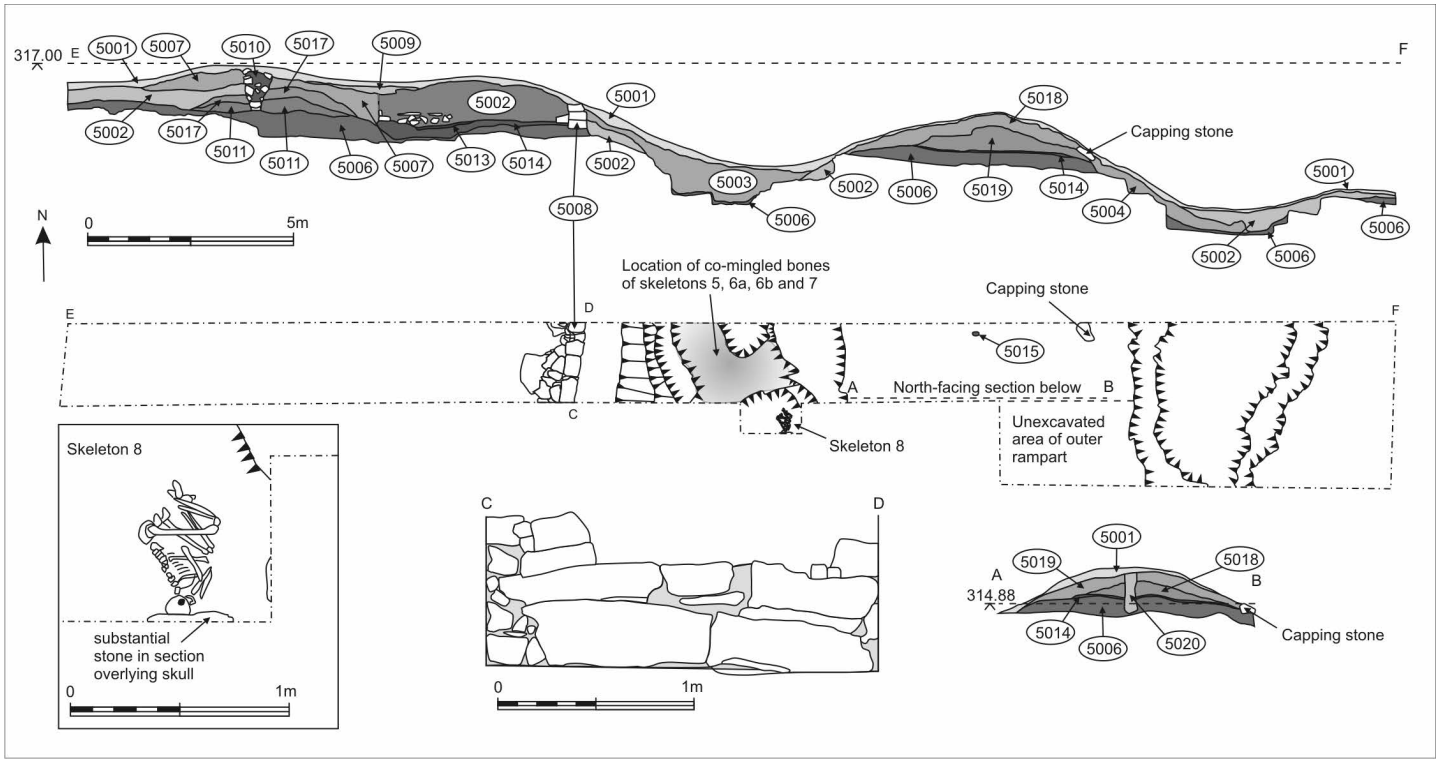
ILLUS. 12 Aerial view looking south showing Trench 5 in the foreground, Trench 1b behind and Trench 6 beyond that. To the right is Trench 3. The positions of the tarpaulins used for the test-pits can be seen as discolorations in the vegetation running east-west across the interior of the fort

THE RAMPARTS

Excavation trenches 1, 4 and 5 (and Trench 9 which was excavated as this paper goes to press, see Illus. 3) were situated over the main rampart on the east side of the hillfort (Illus. 12) and all provided remarkably consistent evidence for the form of this rampart and the sequence of deposits. A pre-hillfort soil layer was identified below the main hillfort rampart in Trenches 1 and 5 (Illus 13 and 14). The wall core and facing blocks (1002) observable in the northern section of Trench 1 directly overlay a thin (50–100 mm), dark greyish-brown (10 YR 4/2) soil layer (1013) that contained charred wood flecks, occasional small ochreous fragments and chert chips that could not be confirmed as being man-made. This pre-hillfort soil layer in turn overlay the natural clay substratum (1014). Two fragments of hazel charcoal from the pre-hillfort soil layer date to 760–400 (OxA-23363) and 520–390 (SUERC-32220) cal. BC. The pre-hillfort soil (5014/5014) observable in Trench 5 was reasonably loamy in comparison to other deposits noted on the site and contained occasional flecks of charred material, along with a piece of antler from the very base of the deposit close to the natural clay substratum (5006) and limestone bedrock.



ILLUS. 13 Plan and sections of Trenches 1a and 1b (combined)



ILLUS. 14 Plan and south-facing section of Trench 5

The main rampart consisted of a faced dry stone wall in front of which was a substantial rock-cut ditch. Beyond this a counterscarp bank could be observed in Trench 1, although in the northeast section of the fort a second circuit of defences had been begun (Illus. 3). Trench 5, positioned as a continuous trench over both ramparts, showed the outer rampart to be of different construction to the main rampart, consisting of an earth and stone dump with evidence for a timber breastwork running along its centre. A second rock-cut ditch had been started in front of this outer rampart but this proved only to be shallow and stopped short of the length of the outer rampart, its south terminal being visible in the baulk edge.

Trench 1 measured 33 m by 9 m and Trench 5 32 m by 2 m. Both trenches were laid out in an east-west direction across the main rampart (see Illus. 3, 12–13). A thin turf and topsoil layer extended over the ramparts and comprised a silty soil with limestone cobbles averaging 0.1 m thick, although in places the limestone from the rampart wall erupted above the surface.

The stone rampart comprised a faced wall constructed primarily from the limestone won from the excavation of the ditch (Illus 13 and 14). Some blocks of other rock types were also found, including chert and 'toadstone', and although less common, they are locally occurring material within the limestone. The wall had been formed with front and rear faces of dressed stone with the facing stones keyed into the body of the rampart that consisted of a laid rubble core. In Trench 5 the wall of the hillfort could be seen to be heavily built with the face still surviving up to three courses high and attaining a height of 0.63 m (Illus 14 and 15). In Trench 4 the slumped face of the wall revealed large, thin limestone slabs with evidence for tooling where they had been shaped to key the blocks into the wall's core. In the exposed section of wall face in Trench 1 (A–B in Illus. 13) two separate segments of wall face could be identified that appeared to have been built up to each other (see also Illus. 12). Both sections comprised limestone facing blocks and a compact rubble core, but the northerly section (1017) was bonded with an orange-brown sandy matrix similar to the re-deposited subsoil, and the southerly section (1002) was bonded with a darker loamier fill. Furthermore, the two faces were slightly offset from each other and the south section of wall was composed solely of limestone blocks whilst, unusually, the north section included several blocks of sandstone amongst the limestone. These two wall sections were only keyed in to each other at the base of the construction and overall this implies that two sections of wall were built up to each other (see Illus. 16). Behind the compact rubble core and rear revetment, both trenches revealed a spread of looser pitched stone (1019 and 507) which represents rampart destruction material that had been spread to the rear of the wall (Illus 13 and 14).

The main perimeter ditch, exposed in Trenches 1 and 5, was cut into the natural limestone bedrock. In Trench 1 where it had been completed it had a flat base measuring up to 2.2 m deep below the pre-rampart ground surface, whilst it measured 5 m at its widest point and 2.5 m wide at its base. The rock cut ditch in Trench 1 contained an upstanding, and ragged, section of unexcavated rock with ditch either side of it. There were large quarried blocks that had not been lifted out of the ditch next to this unexcavated slab of rock. It is possible that this section of ditch had never been finished and that separate work gangs had been working towards each other as

ILLUS. 15 Trench 5 looking across the unfinished rock-cut inner ditch with the large facing stones of the wall still *in situ* and the interior of the hillfort beyond (scales = 2 m)

ILLUS. 16 Trench 1b looking west with the unfinished rock-cut ditch in the foreground and a section of surviving stone wall face above (scales = 2 m)

the ditch was quarried out, in the same way that the wall face above appears to have been constructed by separate work gangs. Consistent with this interpretation was the exposed area of ditch in Trench 5 which had only been excavated to a maximum depth of 1.3 m, had a very uneven base and also had ragged edges.

In Trench 1 the ditch contained a thin primary clay lens above the natural bedrock (1012) which is interpreted as the fine-grained material that has percolated through the voids of the main fill, and two small deposits of primary ditch silt against the inner and outer faces (1020 and 1021, see Illus. 13). Animal bone fragments were recovered from the primary ditch silt (1020) and one (*SUERC-31500*) is estimated to have been deposited in 480–380 cal BC (*95% probability*). Two further radiocarbon dates on single entity samples of hazel charcoal (SUERC-26466) and apple family (OxA-21846) charcoal have produced statistically consistent measurements (T'=1.4, T'(5%)=3.8, ν=1) from this context but this material is evidently residual.

Immediately overlying the primary silts and bedrock base of the ditch was the main ditch fill (1004 and 5003) which was identical in Trenches 1 and 5 (and the recently excavated Trench 9 — see Postscript). The deposit comprised a single homogeneous rocky fill with regular voids between irregularly pitched large stone blocks with no tip lines, layering or discrete contexts observable in any of the sections cut across the

ILLUS. 17 North-facing section of Trench 1b showing the wall destruction deposit ditch fill (1004) overlain by subsoil (1005)

rampart (Illus. 17). The voids frequently encountered during excavation allowed fine-grained sediment to wash in over time and adhere to the rocks as a brown clay silt deposit. This deposit is clearly related to the natural subsoil that extends across the site. The rock fill consisted of large, angular stones, including some dressed and semi-dressed blocks. The rocks that had been dressed had been shaped so that they had at least one flat and squared face, tapering behind, and these were directly comparable to surviving areas of *in situ* wall face which had been angled so that they could be keyed into the wall core. The material comprising this fill had therefore evidently come from the stone wall. There was no evidence for localized wall collapse in the form of any discernible discrete contexts, or layering of collapse as would be the case if the wall had fallen in gradually over time. The angle at which much of the stone was pitched was such that the stone could not have rolled or slumped into such a position and neither was there any evidence for the wall facing having collapsed into the ditch as would be expected if there had been wall core stratigraphically layered above wall face. Rather, the facing and core material were mingled throughout the fill, the rocks were at haphazard angles, filling the entire width of the ditch, voids were present throughout, no layering or tip lines were evident and all the sections cut across the ditch showed the same deposit and sequence.

Considering these clear and consistent stratigraphic characteristics it would require special pleading to arrive at any other conclusion than that the stone had been thrown into the ditch as a result of the dismantling of the wall. Furthermore, the fact that there was no evidence for any form of sequence or layering within the ditch fill in any of the sections cut across it, indicates that the destruction of the wall and the deposition of wall material in the ditch occurred as part of a single event. It is noticeable that this same stratigraphy was observed in each of the trenches cut across the ramparts and that the hillfort ramparts are of broadly even height and the ditch has been in-filled to much the same extent around the entire rampart circuit consistent with the systematic dismantling of the wall. This ditch fill is referred to as the 'wall destruction deposit' subsequently in this paper.

Above the wall destruction deposit was a subsoil layer which comprised an orange-brown (10 YR 4/4) ferruginous clay silt that varied between a few centimetres and 0.5 m thick. Above the subsoil was the modern topsoil and turf horizon (1001) which averaged 0.1 m thick and consisted of a dark grey-brown (7.5 YR 3/1) humic horizon.

Within the wall destruction deposit in Trenches 1 and 2 (1004 and 5003) the skeletal remains of nine individuals were recovered. They included four prenatal or neonatal infants, one toddler, an adolescent and three adults. As this paper goes to press a third trench (Trench 9) situated over the main rampart 140 m to the south of Trench 1 (Illus. 3) has produced the remains of a further six individuals from the same ditch fill deposit in just a 4 m wide section (see Postscript).

In Trench 1 an adult female skeleton was found in the north baulk of the trench (Skeleton 1) together with a small quantity of bone representing a prenatal or neonatal infant (Skeleton 2), and in the south baulk of the trench a further adult female skeleton (Skeleton 3) was found also with a small quantity of bone from a second prenatal or neonatal infant (Skeleton 4). The adult skeletons were articulated and haphazardly positioned amongst the wall destruction deposit and had quite clearly not been 'laid out' in the ditch. The fact that the adult skeletons were fully articulated also reveals that these individuals entered the ditch as fleshed corpses, or possibly dying people. They were both found close to the outer edge of the ditch and both lay at an angle so that they were positioned through the vertical profile of the wall destruction deposit adding further evidence for this deposit having accumulated as a single event. This positioning showed that both individuals had entered the ditch from the outer edge whilst wall destruction material was deposited around them. There was no evidence for a hollow or any 'grave' having been formed in the wall destruction material to accommodate these individuals.

In the case of Skeleton 1 the position of the body was so contorted and at different vertical height throughout the fill (Illus 13 and 18) that it was not possible to accurately plan the skeleton as the stone fill fell around it when each bone was lifted, thereby moving the position of underlying and adjacent bones. The skull of this skeleton was encountered at a depth of 0.8 m below the modern ground surface. The body was aligned east-west with the head the highest part of the body and nearest to the east edge of the ditch. The head was facing downwards, the torso extended further down into the ditch fill and was turned on its side to the north. The left arm was trailing behind and the right arm to the front. The pelvis and legs were lower still and

ILLUS. 18 Skeleton 1 showing part of the articulated rib cage and lower mandible at a high level in the wall destruction deposit (left photograph) and the pelvis and flexed legs at a lower level in the same deposit (right photograph). The contorted position of the individual is obvious and the lack of evidence for the individual having been 'laid out' in any formal sense. The irregularly pitched large blocks of the dismantled wall can be seen under, around and on top of the individual

the legs were flexed towards the chest. The skeleton was entirely covered by large blocks of stone from the rampart that appear to have been dropped on top of and around the individual (as evidenced by the uneven pitch and the many voids), and there was no evidence for any laid or placed blocks. The contorted position of this individual, together with the evidence for unhealed bruising apparent on various limb and rib bones (see Mapplethorpe with Thornton this article), provides a strong case for them having been dumped or thrown into the ditch without ceremony. Her cause of death remains unknown. An infant scapula and fragment of infant cranium (Skeleton 2) were found by the feet of Skeleton 1, but many small bones such as these had evidently fallen through voids in the rock fill and so ascertaining the precise position of its original deposition was not possible. The presence of this neonate suggests either that the adult was accompanied by an infant or that she was perhaps heavily pregnant at time of death. Other tiny bone fragments were noted around Skeleton 1 that could have belonged to the infant but these disintegrated on lifting and could not be collected.

The skeletal remains of a second adult female (Skeleton 3) and a neonatal infant (Skeleton 4) were found in the south baulk of Trench 1 within the wall destruction deposit (1004) and a small extension was made to the trench to allow for full excavation of these remains. The top of these remains was located at a depth of 1.1 m below the modern ground surface. Both skeletons were found together approximately 7 m to the south of Skeletons 1 and 2. Skeleton 3 was an articulated adult skeleton that had survived well considering the weight of stone above it and had evidently entered the ditch fully fleshed. As with Skeleton 1, the body had not been 'laid out', but rather the torso and legs were twisted around the larger blocks within (1004), indicating that again the body had entered the ditch as the wall destruction deposit accumulated

ILLUS. 19 Skeleton 3 showing the articulated skull, upper limbs and some ribs and vertebra at a lower level in the wall destruction deposit (left photograph) and the pelvis and lower limbs at a higher level in the same deposit (right photograph). The rock-cut outer edge of the ditch is visible on the left hand side of the right photograph. The irregularly pitched large blocks of the dismantled wall can be seen under, around and on top of the individual

around it. Skeleton 3 was on a different alignment to Skeleton 1, being broadly north-south aligned. The legs and feet were higher up than the torso and skull. The face was turned towards the north, the torso was turned on its side and the legs were angled upwards and flexed at the knee (Illus. 19). The left forearm was under the body and the right hand was behind the cranium.

Both Skeletons 1 and 3 were identified in the baulk edges of Trench 1 and if there had been a grave cut in either case this would have been immediately obvious in the baulk section. However, no trace of any grave cut was evident in either case. Skeleton 3 was that of a woman in her early 20s whilst the few bone fragments representing Skeleton 4 indicate a pre-natal or neonate child, suggesting that, as with Skeleton 1, these could be the remains of a young pregnant woman. Only a few bone fragments of the infant were recovered from 2 m west of Skeleton 3 and this no doubt relates to post-depositional taphonomy as the small bones were observed to have dropped through voids in the rock fill. Rodents had probably also moved small bones when burrowing through the ditch fill as several small animal nests were found in the wall destruction deposit close to these human remains. To the side of Skeleton 3, but still within the wall destruction deposit (1004), was found a small, globular ceramic jar of recognisable Iron Age type (see specialist report below). This jar was broken on one side and would have entered the wall destruction deposit at the same time as the woman. The break is likely to have occurred when it entered the ditch as the broken edges of the sherds were not abraded and the pot fragment was in an otherwise good condition when it was exposed, although it fragmented upon excavation. The radio-carbon date from the organic residue within this pot is clearly problematic as it is far too early, by nearly two thousand years, for this type of ceramic (see Brightman et al. this article).

In Trench 5 the ditch fill (5003) contained the remains of Skeletons 5, 6(1), 6(2), 7 and 8 (Illus. 14). Skeletons 5, 6(1), 6(2) and 7 were fragmentary and disarticulated and

ILLUS. 20 Skeleton 8 in a tightly crouched articulated position close to the ditch base

survived in the upper layers of the fill. The rock cut ditch was shallow and irregular in this section and this meant that the bedrock was much closer to the surface here. Hence these individuals were only ever buried to a shallow depth and this had undoubtedly made them more susceptible to post-depositional taphonomic disturbance by bioturbation and perhaps scavenging animals. They comprised two pre-natal foetuses or neonates (Skeletons 6(1) and 6(2)), an infant around 18 months of age (Skeleton 5) and an adult (Skeleton 7). As these individuals only had a thin cover of stone over them, and their bones were commingled, it is thought that these corpses were originally fleshed and articulated burials subsequently disturbed by rodents and scavengers, such as wolves, and this would account for their incomplete survival. Skeleton 8 was found in a more deeply quarried part of the ditch in the southern baulk of Trench 5 in the lowest part of the wall destruction deposit, just above the limestone bedrock, and was that of a fully articulated teenager in a tightly crouched position (Illus 14 and 20) with head to the south and legs to the north. The torso of this individual was on its side facing east and the head was facing down. The legs were flexed towards the chest and the forearms flexed and to the front and crossing close to the wrists suggesting they had been bound. A large block of stone was positioned directly over the head of the corpse which was tilted downwards at a forced angle, suggesting that it had been dropped on the individual's head deliberately or that the

rock had forced the skull back as the body decomposed and the ditch fill settled. All the skeletal remains were securely located within the destruction deposit and, as with those from Trench 1, their presence in this layer indicates that they were disposed of in the ditch as part of the destruction of the hillfort wall and infilling of the ditch. Radiocarbon dates have been obtained on seven of the nine individuals and these are discussed in more detail below.

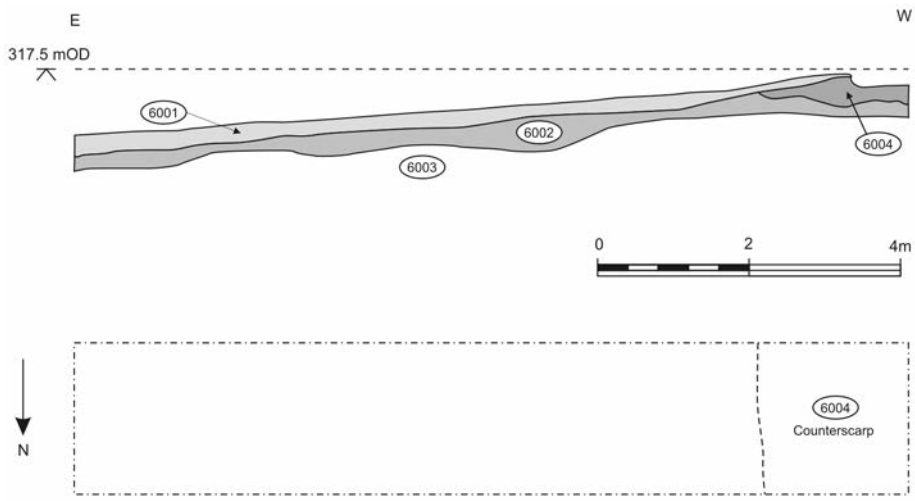
Beyond the rock-cut ditch in Trench 1, a counterscarp was encountered as a low bank (1003) comprising a dark yellowish-brown (10 YR 4/6) clay silt that contained frequent medium and large stone inclusions. The bank dump contained two Beaker period flint scrapers and eight sherds of earlier prehistoric pottery, all evidently residual. The bank material (1003) was overlain by the subsoil layer (1005) which in turn was overlain by the topsoil (1001). Two distinct deposits were evident as part of the construction of the outer bank. The bank material (1003) is described above, but (1016) was a dump of brown (7.5 YR 4/4) heavy silty clay material which represents a dump of different material. The transitions evident in the construction of the wall and counterscarp, and their alignment with the two ditch terminals which never quite met suggest two different construction gangs working up to each other.

The short section of outer bank which can be seen in the north-east corner of the rampart circuit, and was investigated by the cutting of Trench 5, differed in construction from that of the main rampart wall. It comprised a dump of redeposited soil and subsoil (5018) with a partial capping of stony material (5019). The redeposited soil dump contains remains of iron panning and, like the main wall, was constructed on top of the pre-hillfort soil horizon (5014), which in turn overlay an earlier subsoil (5006) and the limestone bedrock. A key feature of the outer bank is the post-hole (5020) revealed in section cutting through (5018) and (5019) (Illus. 14). Evidence for a further post was noted by a post socket in the base of the cutting through the bank (5015). This suggests that the bank had a breastwork comprising spaced timber uprights, presumably with some infilling, such as woven hurdles, between. The bank only extends for approximately 60 m before it tapers away. Beyond the bank an outer ditch was present but this only extends for approximately 35 m, and the excavation trench showed that it had only ever been excavated to a shallow depth (maximum of 1.1 m below the ground surface) with no steeply defined face on its outer side, although it had a flat base. The ditch terminated in the southern baulk of the trench and it is clear that this outer ditch, although only just started, was never finished.

The incomplete and more rapid construction technique employed on the outer bank and its attendant ditch imply a more *ad hoc* defence augmenting the main wall and ditch circuit. This could suggest that the occupants of the hillfort were responding to an impending threat and the need for the rapid construction of a second defensive circuit.

Trench 6 was opened across the projected line of the outer bank and ditch between Trench 4 and the hillfort entrance to test whether the outer bank and ditch had ever continued southwards where it is no longer visible as an upstanding earthwork (Illus. 3). No trace of outer defensive works was encountered in Trench 6. It revealed only limestone bedrock (Illus 21 and 22), demonstrating that the short section of bivallate defences noted in the north-east area of the defensive circuit had never extended any

ILLUS. 21 Trench 6 looking west fully excavated with the main inner ditch and turf-covered wall beyond. No traces of an outer ditch and bank can be seen despite being excavated down to bedrock



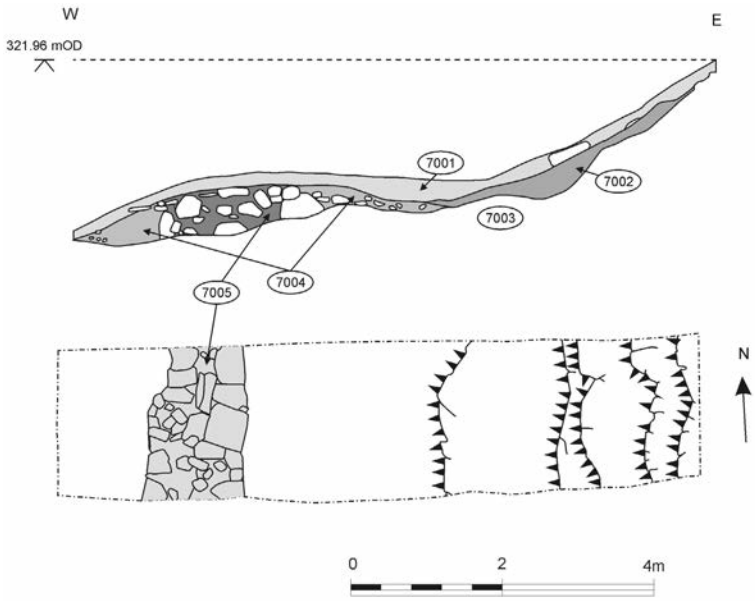
ILLUS. 22 Southern section of Trench 6 with shallow counterscarp deposit at the western end (right)

further and was, therefore, clearly an unfinished project. The very slight traces of the counterscarp bank on the outside of the main ditch could, however, be observed.

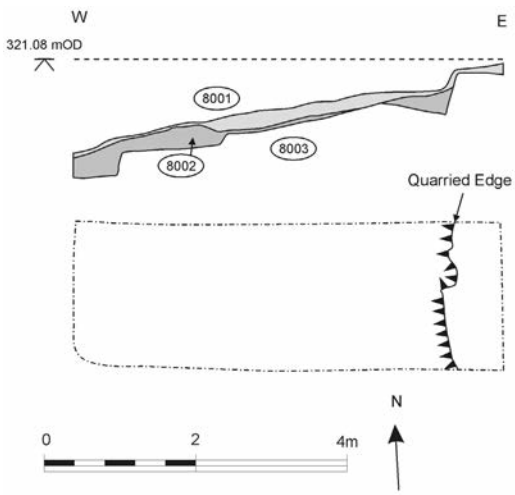
The question of whether the rampart had ever extended around the precipitous west side of the hillfort had not previously been satisfactorily resolved. Trenches 7 and 8 were opened on the western scarp edge of the hillfort (Illus. 3) to test this. Trench 7 measured 8.5 m by 2 m and revealed a quarry ledge, or 'scoop', which had resulted in the limestone being deliberately quarried back into the hillside to form a natural platform on the crest of the slope to the rear of the scarp edge (Illus 23 and 24). This quarried ledge could be observed on the ground surface running for over 100 m northwards along the scarp edge from the south-western corner of the fort. Material from the quarrying had been used to construct a dry stone wall running along the lip of the scarp slope. The wall was relatively small in its current, denuded state with only the inner face and some core material surviving, the outer face having slipped down the steep slope below. The surviving portion of wall had a maximum surviving width of 1.25 m and a maximum height from the bedrock base of 0.63 m and comprised a mixture of small stones and large dressed blocks bedded together in a clay matrix similar to the ferruginous subsoil deposit observed across much of the site. Although there was little evidence for regular coursing, the larger dressed blocks suggest that originally it was of fairly substantial construction, though not as massive as the stone wall on the eastern side of the fort.

No small finds were recovered from the trench and neither were any environmental or organic samples forthcoming that could have been used to date the quarrying or wall construction. This wall may have been deliberately reduced and pushed down the slope when the rest of the ramparts were levelled, or the wall could have slipped down the slope over time due to natural erosion. Trench 8 was located approximately 25 m to the south of Trench 7 and was similarly positioned to

ILLUS. 23 Trench 7 looking west over the scarp edge. The quarried scoop is in the foreground with the denuded stone wall beyond which forms the current crest before the break in slope (scales = 2 m)



ILLUS. 24 Plan and section drawing of Trench 7



ILLUS. 25 Plan and section drawing of Trench 8

investigate the quarry scoop on the crest of the slope, and to test whether any man-made wall survived on the scarp edge. Whilst the quarried ledge could clearly be seen (Illus. 25), no evidence for a wall survived at this point along the slope. No small finds, environmental or organic remains were recovered.

POST-HILLFORT

All deposits to the rear of the inner wall in Trench 5, including the rubble resulting from the destruction of the hillfort wall, were cut by a substantial unweathered post-hole (5010) which was filled with stone packing and which had been cut through the modern subsoil and into the archaeological layers indicating it to be relatively modern. Samples of organic material from the post-hole fill were taken but none were considered suitable for radiocarbon dating.

Cut into the top of the counterscarp bank (1003) in Trench 1 was an irregular pit feature (F1008) that had maximum dimensions of 0.7m by 1.15m. This feature was shallow, with a depth of just 0.25m, although a small stone-defined socket was observed in its base. Its purpose remains unknown although it appears to have been structural. As it cut into the top of the bank it could be relatively modern, perhaps a post for part of a boundary, or alternatively it could have served a similar purpose during the hillfort's use. No small finds or datable material were recovered from it.

RADIOCARBON DATING

by Jim Brightman, Christopher Bronk Ramsey, Gordon Cook, Peter Marshall, John Meadows and Clive Waddington

INTRODUCTION

Seventeen radiocarbon samples from Fin Cop were dated between 2009–12 by Accelerator Mass Spectrometry (AMS) at the Oxford Radiocarbon Accelerator Unit (ORAU) and the Scottish Universities Environmental Research Centre (SUERC): nine human bones, one animal bone, three charred residues on pottery, and four samples of wood charcoal. The aims of the dating programme were:

- to elucidate the chronology of the hillfort, by providing precise dates for its construction
- to test the idea that the numerous skeletons in the ditch might all be victims of a single event and thus have died at the same time

APPROACH TO SAMPLE SELECTION

Only short-lived, single-entity samples (Ashmore 1999) were considered for dating. Datable materials recovered during the excavation included human and animal bone, wood charcoal, and carbonized food residues adhering to pottery sherds. Charcoal in bulk flotation samples from contexts (1012), (1013), (1014), (5010), (5013), and (5015) was sorted for fragments which had insignificant intrinsic ages, either because the specimen was from a short-lived tree taxon, or because it was twig, branch or sapwood. Suitable fragments were obtained from the primary ditch silt (1012) and two contexts predating the enclosure ditch (1013, 1014), but contexts 5010, 5013, and 5015, which postdate the abandonment of the enclosure, did not yield any suitable charcoals. The taphonomic history of the datable charcoals is uncertain, and their dates therefore give only *termini post quos* for their contexts (and thus for the enclosure).

Potential human and animal bone samples were chosen to ensure that any individual was only dated once (except for the intentional replication of Skeletons 1 and 7), following assessment of skeletal element, age, and sidedness. This process allowed two neonates, Skeletons 6(1) and 6(2), to be distinguished from the infant Skeleton 7 and the adult Skeleton 5. All four of these individuals were disarticulated, but their bones were only found in a restricted area of context (5003) in Trench 5, and it was considered that such concentrations of bones from the same individuals most likely represented disturbed inhumations, rather than re-deposited bones. The fully articulated Skeleton 8 [a sub-adult] was also found in context (5003), and is evidently a different individual. Two articulated adult skeletons from Trench 1a/1b, Skeleton 1 and Skeleton 3, were also dated. In addition, small find [1117], the radius of an immature sheep or goat from (1020), the basal fill of the enclosure ditch in Trench 1b, was dated, as this bone was found to articulate with an ulna from the same context.

All the bone samples selected were therefore either found in articulation or were considered to have been articulated at the time of deposition. As well as having negligible intrinsic age, such samples are extremely useful in Bayesian chronological models (see below) because it can be reasonably assumed that they have not been deposited more than a few months after the death of the animal, or person, in question (Mant 1987). Their calibrated radiocarbon ages are therefore excellent estimates of the dates of their contexts, and the relative dating implicit in stratigraphic relationships between contexts can be used to constrain the modelled dates.

The two sherds with interior residue from Trench 2/Test-pit 3 submitted in 2009 were dated to provide a direct date for the sherds and consequently only provide a *terminus post quem* for their context as they could be residual.

LABORATORY MEASUREMENT

The seven samples measured at ORAU were processed according to methods outlined in Brock et al. (2010) and Bronk Ramsey et al. (2004a) and dated by AMS (Bronk Ramsey et al. 2004b); ten radiocarbon measurements were obtained from SUERC. The charcoal and carbonized residue samples were pre-treated by the acid-base-acid protocol (Stenhouse and Baxter 1983) and the bone samples using a modified Longin method (Longin 1971). CO_2 was obtained from the pre-treated samples by combustion in pre-cleaned sealed quartz tubes (Vandeputte et al. 1996) and then converted to graphite (Slota et al. 1987). The samples were dated by AMS, as described by Xu et al. (2004).

Both laboratories maintain continual programmes of quality assurance procedures, in addition to participating in international inter-comparisons (Scott 2003; Scott et al. 2010), which indicate no significant offsets and demonstrate the validity of the precision quoted.

RADIOCARBON RESULTS

The radiocarbon results are given in Table 3 and are quoted according to the international standard set at the Trondheim convention (Stuiver and Kra 1986). These are conventional radiocarbon ages (Stuiver and Polach 1977).

The radiocarbon results have been calibrated with data from Reimer et al. (2009), using OxCal (v4.1) (Bronk Ramsey 1995; 1998; 2001; 2009a). The date ranges given in Table 3 have been calculated by the maximum intercept method (Stuiver and Reimer 1986) at two sigma (95% confidence). They are quoted in the form recommended by Mook (1986), rounded outwards to five years if the error term is less than twenty-five radiocarbon years, or to ten years otherwise. The probability distributions of the calibrated dates (Illus. 26) were obtained by the probability method (Stuiver and Reimer 1993). They should therefore accurately date all the individual samples. Where more than one radiocarbon result is available for the same sample, their weighted mean is normally regarded as the best estimate of that sample's radiocarbon age, provided that the results are statistically consistent (Ward and Wilson 1978).

Stable isotope measurements

Carbon and nitrogen stable isotope analysis was applied to human bone samples as the potential for diet-induced radiocarbon offsets if an individual has taken up carbon from a reservoir not in equilibrium with the terrestrial biosphere (Lanting and van der Plicht 1998) might have implications for the chronology of the site.

The stable isotope results (Table 3) indicate that the humans consumed a diet predominantly based upon temperate terrestrial C3 foods (Schoeninger and DeNiro 1984; Katzenberg and Krouse 1989). The radiocarbon results are therefore unlikely to be affected by any significant reservoir effects (Bayliss et al. 2004) and the calibrated date ranges can be regarded as accurate estimates of the ages of their samples. All bone samples have C: N values within the range normally used to indicate good collagen preservation (2.9–3.6; DeNiro 1985).

THE SAMPLES AND SEQUENCES

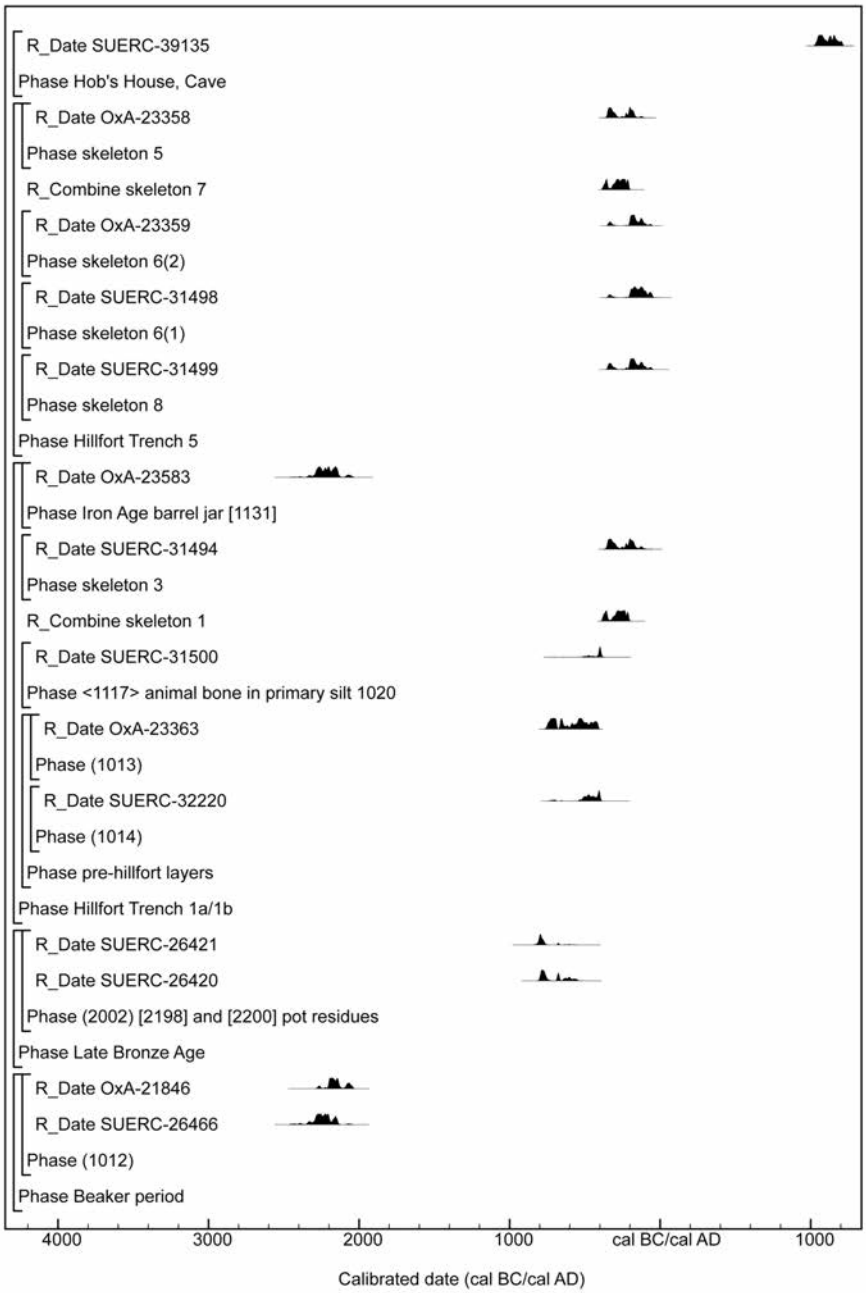
Trench 2 [c]

Two early first millennium cal. BC charred residue samples (SUERC-26466 and OxA-21846), from the interior of two separate pottery sherds (1012) in Trench 2, indicate the presence of pre-hillfort occupation on the site. The dates are statistically consistent ($T'=0.7$, $T'(5\%)=3.8$, $\nu=1$; Ward and Wilson 1978) providing a dating span of 820–550 cal. BC at 95.4% probability, although at the 68% probability both could date to the eighth century cal. BC, suggesting a Late Bronze Age date.

Trench 1 [c]

Two late-third millennium cal. BC charcoal samples (SUERC-26466 and OxA-21846), from the primary ditch silt (1012) in Trench 1, may well be associated with an earlier episode of occupation at Fin Cop. However, their uncertain taphonomy means that they give only *termini post quos* for their context.

The wall core and facing blocks (1002) in Trench 1a directly overlay occupation layer (1013) from which a single fragment of *Corylus* charcoal (OxA-23363) provides a *terminus post quem (TPQ)* for the hillfort construction. The pre-hillfort layer in turn overlay the natural clay substratum (1014) from which SUERC-32220, a fragment of *Alnus/Corylus*, provides a further *TPQ* for the construction of the hillfort. The date of the enclosure is perhaps closest to that of sample [1117], the articulating sheep/goat



ILLUS. 26 Probability distribution of dates from Fin Cop. The distribution represents the relative probability that an event occurred at a particular time. The distribution is the result of simple radiocarbon calibration (Stuiver and Reimer 1993)

radius/ulna (SUERC-31500) from the primary silt in Trench 1, (1020), at the base of the ditch.

Two articulated skeletons from within the wall destruction deposit (1004) were dated: Skeletons 1 and 3. Replicate measurements (OxA-21387 and SUERC-26419) on Skeleton 1 from Trench 1a narrowly fail Ward and Wilson's (1978) test of consistency, at the 5% significance level (T'=3.9, T'(5%)=3.8, ν=1), but this does not necessarily mean that either result is inaccurate. If measurement errors are estimated accurately, one pair of replicate results in twenty should be inconsistent at the 5% significance level (i.e., T'>3.8), and one pair in one hundred should be inconsistent at the 1% level (T'>6.6). The weighted mean is accepted here as the most accurate estimate of the radiocarbon age of Skeleton 1 (Table 3).

Skeleton 3 (SUERC-31494) lay to the side of an Iron Age barrel jar [1131] in destruction deposit (1004). The carbonized residue adhering to the interior of one sherd from it produced a Beaker period date (2340–2050 cal. BC; OxA-23583), which is clearly too old for its stratigraphic position and form. As the sherd was one of eighteen from the same context which together formed *c.* 45% of the jar, it is very unlikely that it could simply be residual. The result is clearly anomalous and has therefore been excluded from the modelling (see below).

Trench 5 [c]

In Trench 5, the wall destruction deposit (5003) contained the skeletal remains of five individuals; Skeletons 5, 6(1), 6(2), 7, and 8. Skeleton 8 (SUERC-31499) was fully articulated and found in the lower layers of the fill. Stratigraphically situated above Skeleton 8, but part of the same destruction deposit, were the commingled remains of four individuals: Skeleton 5 (OxA-23358), Skeleton 6(1) (SUERC-31498), Skeleton 6(2) (OxA-23359), and Skeleton 7 (weighted mean OxA-23360 and SUERC-40141; 2215±19; T' = 2.2, T'(5%) = 3.8, ν=1).

INTERPRETATION

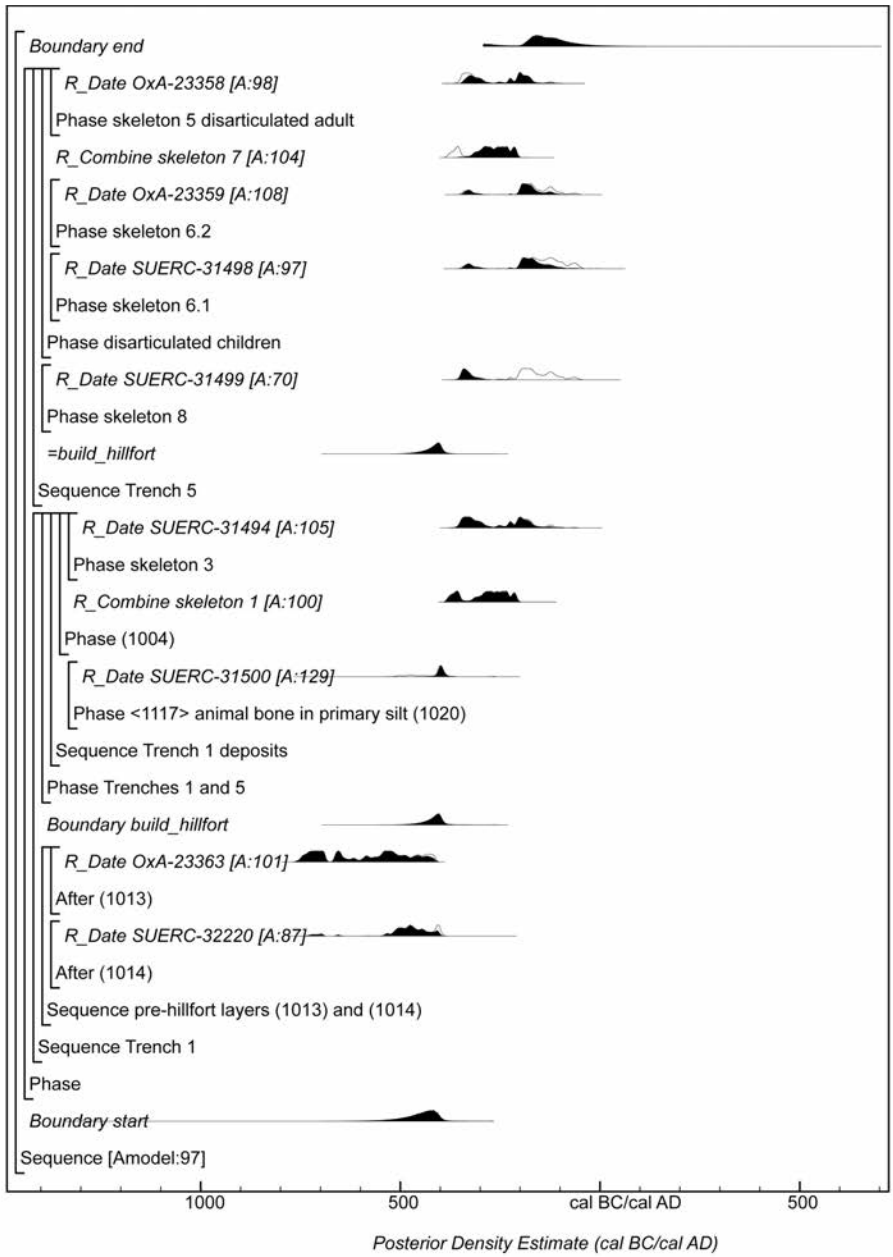
A Bayesian chronological model can be used to further interpret the radiocarbon results. The Bayesian approach to chronological modelling (Buck et al. 1996) is based on the premise that whereas radiocarbon dating may accurately date individual samples, archaeologists are generally more interested in the dates of events that are directly or indirectly associated with these samples, or in the order of, or length of time between, such events. Bayesian models allow scientific dating results to be combined with relative dating information, such as that provided by stratigraphy, to produce mathematically robust *posterior density estimates* (which, by convention, are always given in italics) of the dates of the events of interest. Unlike simple calibrated radiocarbon dates, such estimates are inherently interpretative, and may change if additional scientific dating results are obtained, or if the same data are remodelled under different assumptions about the chronological relationships between samples. When radiocarbon results are not explicitly modelled, however, archaeologists tend to over-estimate the spread of the underlying dates (Bayliss et al. 2007, 7–8).

A Bayesian model of the Iron Age chronology, created in OxCal (v4.1) (Bronk Ramsey 1995; 1998; 2000; 2001; 2009a), is shown in Illus. 27. The relative dating

TABLE 3 Radiocarbon dating results

Laboratory number	Sample reference	Material & context	C:N	$\delta^{15}N$ (‰)	$\delta^{13}C$ (‰)	Radiocarbon age (BP)	Calibrated date range (95% confidence)	*Posterior Density Estimate (95% probability)*
Beaker Period								
SUERC-26466	1012A	Charcoal, *Corylus* sp. from the primary ditch silts at the base of the rock cut ditch			-25.8	3800±35	2350–2130 cal BC	–
OxA-21846	1012B	Charcoal, cf. Maloideae – as SUERC-2646			-26.5	3748±26	2280–2030 cal BC	–
Late Bronze Age								
SUERC-26420	[2002] 2198	Carbonised food adhering to the interior of pot sherd from (2002) Trench 2			-28.9	2560±35	810–550 cal BC	–
SUERC-26421	[2002] 2200	Carbonised food adhering to the interior of pot sherd from (2002) Trench 2			-26.1	2600±35	820–670 cal BC	–
Hillfort Trench 1								
SUERC-32220	<8> (1014)	Charcoal, *Alnus/Corylus* sp. from the pre-hillfort natural clay sub soil beneath (1013)			-27.3	2380±30	520–390 cal BC	*745–690 (5%) or 540–395 (90%) cal BC*
OxA-23363	<11> (1013)	Charcoal, *Corylus* sp. from the pre-hillfort occupation layer			-24.7	2452±25	760–400 cal BC	*755–685 (28%) or 670–610 (13%) or 600–410 (54%) cal BC*
SUERC-31500	<1117> in (1020)	Immature sheep/goat bone, right radius (articulating with ulna) from basal ditch deposit (1020)	3.4	4.7	-21.5	2350±30	480–380 cal BC	*430–360 (94%) or 275–260 (1%) cal BC*
OxA-21387	Skeleton 1 (1004A)	Human bone, femur from fully articulated skeleton (adult female) within the destruction layer (1004) in the ditch	3.0	10.0	-20.2	2198±27		
SUERC-26419	Skeleton 1 (1004B)	As OxA-21387	3.5	9.6	-20.5	2285±35		
	Skeleton 1	weighted mean (T' = 3.9, T'(5%) = 3.8, ν=1)				2231±22	390–205 cal BC	*385–345 (22%) or 320–205 (73%) cal BC*
SUERC-31494	Skeleton 3	Human bone, right fibula from articulated skeleton (adult female) within (1004)	3.4	9.4	-21.0	2165±30	360–110 cal BC	*360–155 cal BC*

OxA-23583	Pot residue (1004)	Carbonised residue adhering to the interior of pottery sherd [one of 18 pieces forming c 45% or and Iron Age barrel jar [?1131] from (1004) 0.1 m above skeleton 3			-28.8	3784±38	2340–2050 cal BC	–
Hillfort Trench 5								
OxA-23358	Skeleton 5	Human bone, adult cervical vertebra from disarticulated skeleton (?adult) confined to a small area within (5003)	3.2	10.0	-20.2	2166±24	360–160 cal BC	*350–275 (41%) or 260–160 (54%) cal BC*
SUERC-31498	Skeleton 6.1	Human bone, neonate, right humerus from disarticulated skeleton (?neonate) intermingled with skeleton 6(2) and scattered in the same area as skeletons 5, 7, and 8 within (5003)	3.5	10.6	-20.7	2120±30	350–40 cal BC	*350–295 (16%) or 210–90 (79%) cal BC*
OxA-23359	Skeleton 6.2	Human bone, neonate, right humerus from disarticulated skeleton (?neonate) intermingled with skeleton 6(1) and scattered in the same area as skeletons 5, 7, and 8 within (5003)	3.2	11.1	-20.1	2135±23	350–90 cal BC *210–105 (78%) cal BC*	*345–295 (17%) or*
OxA-23360	Skeleton 7	Human bone, right tibia shaft, from disarticulated skeleton (?child <1yr)in the same area as skeletons 5, 6(1), 6(2), 7, and 8 within (5003)	3.2	12.4	-19.5	2247±24		
SUERC-40141	Skeleton 7 – sample B	As OxA-23360	3.2	11.6	20.4	2190±30		
	Skeleton 7	weighted mean (T' = 2.2, T'(5%) = 3.8, ν=1)				2215±19	385–200 cal BC	*320–205 cal BC*
SUERC-31499	Skeleton 8	Human bone, right second metacarpal (sub-adult), articulated in a tightly crouched position under a layer of rock within (5003)	3.3	9.5	-20.5	2140±30	350–50 cal BC	*360–290 cal BC*
Hob's House skeleton								
SUERC-39135	NHMUK PA HR 1607	Human bone, right tibia shaft	3.2	8.8	-20.2	905±30	cal AD 1030–1220	–



ILLUS. 27 Probability distributions of dates from Iron Age Fin Cop. Each distribution represents the relative probability that an event occurs at a particular time. For each radiocarbon date, two distributions have been plotted: one in outline which is the result of simple radiocarbon calibration, and a solid one based on the chronological model used. The other distributions correspond to aspects of the model. For example, the distribution *'build_hillfort'* is the posterior density estimate for the construction of the hillfort. The large square brackets down the left-hand side of the diagram and the OxCal keywords define the overall model exactly

incorporated in the model is outlined in the previous section. In addition, we have included the estimated date for the construction of the hillfort obtained from the sequence in Trench 1 as a constraint on the date of the individuals found within the destruction deposit (5003) in Trench 5.

The model's good overall index of agreement (A_{model} 97; Illus. 27) indicates that the radiocarbon dates are consistent with the relative dating built into the model structure. It provides an estimate for the construction of the hillfort rampart of *495–370 cal. BC (95% probability; build hillfort;* Illus. 27) and probably *435–390 cal. BC (68% probability)*. The deposition of the skeletons in the destruction layer (1004 and 5003) may have taken place up to a couple of centuries later, but interpretation of the radiocarbon results is far from straightforward. For example, although the radiocarbon ages of the seven dated humans (including the weighted means for Skeletons 1 and 7) are not statistically consistent (T'=21.9, T'(5%)=12.6, ν=6; Ward and Wilson 1978) the archaeological evidence strongly suggests that they all derive (i.e. died) as part of a single event — destruction of the hillfort (1004 and 5003). In order to identify which measurements disagree most with the others, outlier analysis (Christen 1994) was implemented in OxCal (Bronk Ramsey 2009b) using the model defined by Christen (2003). Firstly, the weighted means for Skeletons 1 and 7 were used with a prior probability that each of the seven results was an outlier being 0.05. The results are shown in Table 4. Two of the results are clearly identified as being outliers — Skeletons 1 and 7.

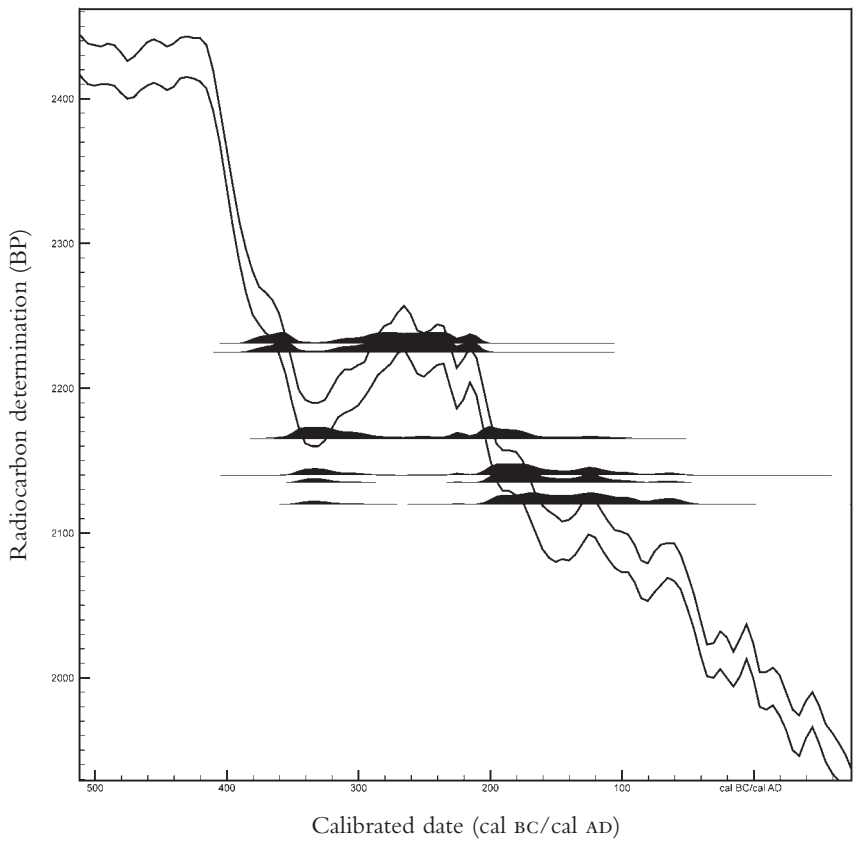
Outlier analysis was repeated but this time all the measurements were included, namely all nine radiocarbon determinations. The results are shown in Table 5, with two measurements from Skeletons 1 (SUERC-26419) and 7 (OxA-23360) clearly identified as being outliers. What this statistical analysis cannot do is identify the reasons why these measurements are outliers, although the actual date of these samples clearly falls on a complex part of the calibration curve (Illus. 28). If the two measurements identified as outliers, SUERC-26419 and OxA-23360, are excluded the remaining seven measurements are statistically consistent (T'=, 6.5; T'(5%)=12.6, ν=6; Ward and Wilson 1978) and the resultant estimate derived from outlier analysis

TABLE 4 Outlier analysis (including weighted means): the prior probability for each measurement being an outlier is 0.05 (5%)

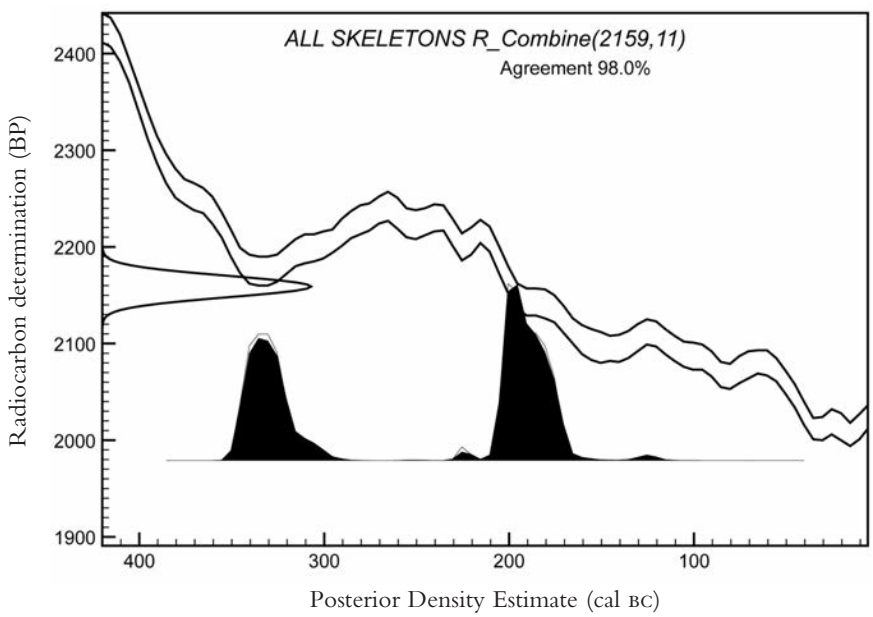
SAMPLE	LAB. CODE	PRIOR	POSTERIOR
Skeleton 1	1004	0.05	0.90
Skeleton 3	SUERC-31494	0.05	0.02
Skeleton 8	SUERC-31499	0.05	0.04
Skeleton 6.2	OxA-23359	0.05	0.08
Skeleton 6.1	SUERC-31498	0.05	0.10
Skeleton 5	OxA-23358	0.05	0.03
Skeleton 7	Skeleton 7	0.05	0.90

TABLE 5 Outlier analysis (including all nine measurements): the prior probability for each measurement being an outlier is 0.05 (5%)

SAMPLE	LAB. CODE	PRIOR	POSTERIOR
Skeleton 1	OxA-21387	0.05	0.08
Skeleton 1	SUERC-26419	0.05	0.99
Skeleton 3	SUERC-31494	0.05	0.02
Skeleton 8	SUERC-31499	0.05	0.03
Skeleton 6.2	OxA-23359	0.05	0.08
Skeleton 6.1	SUERC-31498	0.05	0.12
Skeleton 5	OxA-23358	0.05	0.02
Skeleton 7	SUERC-40141	0.05	0.04
Skeleton 7	OxA-23360	0.05	0.97



ILLUS. 28 Radiocarbon dates from skeletons plotted on the radiocarbon calibration curve (Reimer et al. 2009)



ILLUS. 29 Combined dates from the skeletons using outlier analysis

for the death of these seven individuals is shown in Illus. 29. Although strongly bi-modal, given the archaeological evidence for destruction of the hillfort ramparts shortly after construction, there was only time for a very small area of primary fill to accumulate, the early part of the distribution *355–300 cal. BC (40% probability)* would seem to be the most likely date for the death of those people interred in the ditch.

PREHISTORIC POTTERY

by Pauline Beswick with a contribution by Kevin Cootes

A total of 246 pieces of pottery, weighing 1715 g, was recovered, mainly from Test-Pit 3 and its extension as Trench 2. Evidence was found here for at least seven vessels of LBA/EIA style in two fabric types. A total of thirty-one pieces of pottery was recovered from Trench 1, representing at least three vessels; one a broken Iron Age barrel jar and several sherds probably from a Neolithic Peterborough Ware vessel. In addition seven sherds were found in Trench 3 and a fragment in Trench 6. A summary pottery catalogue is produced here (Table 6) and the full sherd-by-sherd catalogue is included in the project archive.

Each piece of pottery was examined using a hand lens (×10 and ×20) and weighed to the nearest gram (fragments weighing less than 1 g are excluded from final weight totals, and sherds used for residue analysis and dating are omitted). Fabrics were analyzed using the system recommended by the Prehistoric Ceramics Research Group (1997) and some thin section analysis was undertaken.

TABLE 6 Summary analysis of prehistoric pottery by trench, fabric, sherd numbers and weight

TRENCH	FABRIC	SHERD NOS	WEIGHT (grams)	COMMENTS
1	F1	5	128 g	
	?F1	18	204 g	Iron Age barrel jar
	F3	6	9 g	
	?F3	1	–	fragment
	F4	1	13 g	
Sub totals		*31*	*354 g*	
2	F1	129	817 g	65 of these sherds, weight 381 g, from Test Pit 3
	?F1	4	6 g	
	F2	66	453 g	
	?F2	1	–	fragment
	?F	7	13 g	
Sub totals		*207*	*1289 g*	
3	F1	2	9 g	
	F2	2	55 g	
	F3	2	7 g	
	?F3	1	–	fragment
Sub totals		*7*	*71 g*	
6	F1	1	1 g	
TOTALS		246	1715 g	

FABRIC

Four fabric types were recognized and their relative quantities are presented in Table 6 and in the archive. Fabric identification was uncertain or unidentifiable in 13% (32) of the pieces.

Fabric 1 Sandy fabric, grey brown to buff surfaces with main inclusions sparse to moderate degraded basic igneous, up to 8 mm in size and poorly sorted. LBA/EIA; at least three vessels (Table 6).

Fabric 2 Coarse sandy fabric, dark brown and red to buff surfaces with sparse quartzite angular inclusions, up to 5 mm in size, and rare to sparse degraded basic igneous inclusions, up to 7 mm in size, and all poorly sorted. LBA/EIA; at least four vessels.

Fabric 3 Fine soapy-feeling fabric, brown to pink surface with rare angular inclusions in flint, chert and quartzite up to 7 mm in size and poorly sorted. Probably Neolithic (compares with Peterborough Wares from Derbyshire and elsewhere, for example see references in Makepeace and Beswick 2006, 8–9); at least one vessel.

Fabric 4 Hard, sandy, calcareous fabric, dark brown surface with rare, angular quartz inclusions up to 6 mm in size and sparse rounded voids 1 to 4 mm in size, and all poorly sorted. The voids represent leached out calcite material originally in both the clay and temper (one sherd in Trench 1).

PETROGRAPHY

by Kevin Cootes

All samples analyzed were from Trench 2 and included sherds representative of both Fabrics 1 and 2. All clays used in Fabrics 1 and 2 are non-calcareous and, as well as basic igneous inclusions, shale is present in several Fabric 1 sherds and sandstone in one Fabric 2 sherd. This could suggest possible clay sources in the Dark Peak (gritstone geologies) rather than the White Peak (limestone geologies) or, perhaps more likely, a fluvial source such as the River Wye because of the rounded nature of much of the sand temper. Rhyolite, present in three Fabric 2 sherds, is not known from any White Peak igneous source. Specimens of Fabric 1, in particular, look remarkably similar to pottery excavated from a LBA/EIA site on Gardom's Edge on the gritstone Eastern Moors (Beswick 1995; 1999; 2003), but the sand content of the Fin Cop sherds implies a different origin. One piece analyzed was found to be a small lump of weathered basic igneous rock and there are other rock pieces among the collection which still need to be identified. Caches of weathered igneous rock excavated at Gardom's Edge are interpreted as evidence for on-site pottery manufacture (Cootes in prep.).

FORMS

The sherds are described in the archived pottery catalogue with further detailed description of key sherds and vessels in the text below.

Trench 1 (Illus. 30)

1052: Rim sherd, (context 1003), slightly inverted with a flat top, and below the short neck (*c.* 200 mm), *c.* 7 mm thick, the body broadens to over 12 mm thick. LBA/EIA in style. Fabric 1, but some large, igneous inclusions, and the clay's less sandy texture and slightly soapy feeling indicate a grog component. Three body sherds from context 1002 may be from the same vessel, a large storage jar of LBA/EIA style, as could an abraded base sherd from context 1001.

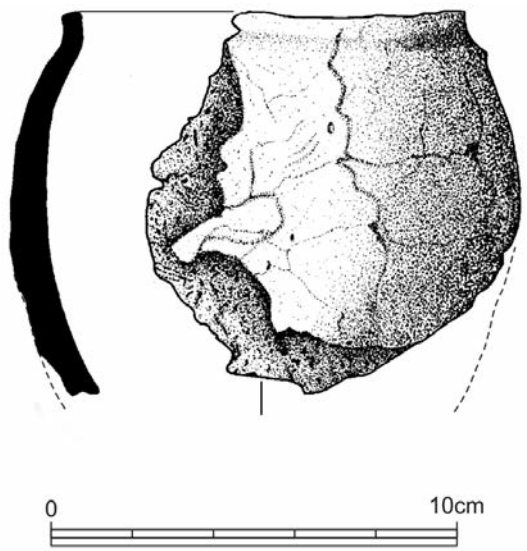
1058: Rim and shoulder sherd, (context 1002) with pointed everted rim, angled shoulder and smoothly finished, hard fabric. EIA. Fabric 4.

1131: Barrel jar, (context 1004) around 40% of upper body and over 50% of rim of an asymmetrical globular-shaped jar comprising eighteen pieces weighing 204 g in total. The rim is *c.* 100 mm in diameter, flat-topped, with a short (*c.* 7 mm) upright neck. No decoration is evident. Stylistically a barrel jar of Iron Age date. Internal residue sampled for radiocarbon dating (see Table 3). Many of the surviving pieces are extremely friable and laminated as if having been burnt, but the fabric appears to be similar to Fabric 1 and to contain degraded, rare, igneous inclusions.

Trench 2 (Illus. 31)

2001: Decorated shoulder sherd (fresh), context (2003): fingertip/nail pinched decoration. LBA/EIA style. Fabric 2. Compare with sherd 2043 — probably same vessel.

2003: Rim sherd, context (2003): everted and flattened and possible evidence for fingertip decoration on break. LBA/EIA style. Fabric 2.



ILLUS. 30 Selected Late Iron Age illustrated ceramics from Fin Cop, Trench 1

2008: Decorated body sherd, context (2001): fingertip decoration. LBA/EIA style. Fabric 1.

2021: Rim sherd, context (2001): ?upright and flat topped. LBA/EIA style. Fabric 2.

2028: Rim and shoulder sherd, context (2002): everted and slighty beaded rim. LBA/EIA style. Fabric 2. Compare with sherd number 2096 — possibly same vessel.

2043: Decorated shoulder sherd, context (2003): fingertip/nail pinched decoration. LBA/EIA style. Fabric 2. Compare with sherd number 2001 — probably same vessel.

2096: Rim sherd, context (2001): everted and slightly beaded. LBA/EIA style. Fabric 2. Compare with sherd number 2028 — possibly same vessel.

2175: Wall and base angle sherd: Fabric 1, Test-Pit 3 (topsoil — later extended into Trench 2).

2176: Rim sherd: upright and flat topped, *c.* 20 cm internal diameter. Fabric 1, Test-Pit 3 (topsoil — later extended into Trench 2).

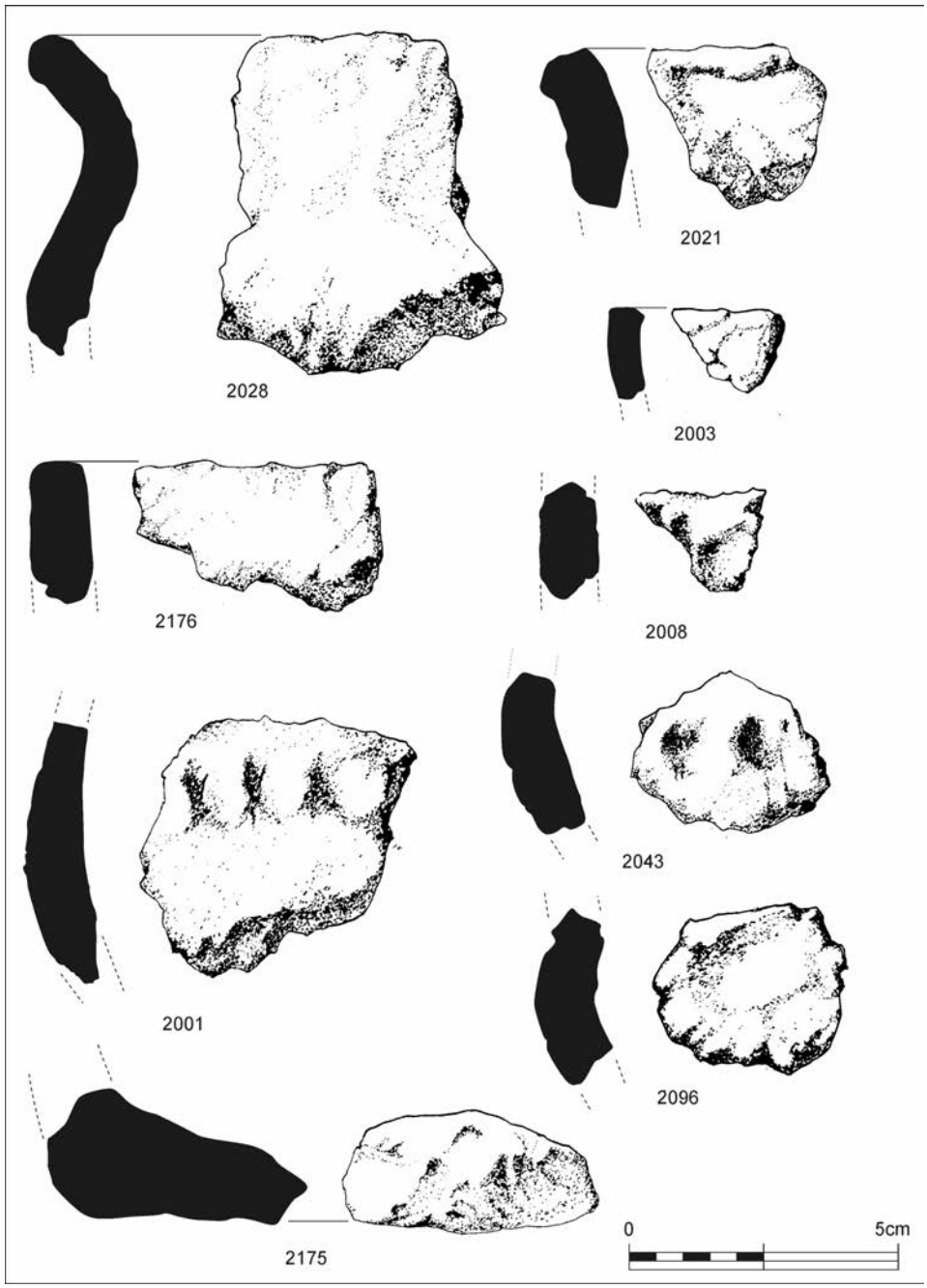
Trench 3

3011: Decorated rim sherd, context (3001): upright, slightly beaded rim with fingertip decoration along outer edge. LBA / EIA style. Fabric 1.

3013 and 3018: two body sherds. Both are in the sandier Fabric 2, and both, 10 and 12 mm thick respectively, are from a large storage jar, or jars, probably of LBA/EIA date.

Trench 6

6003a and 6003b: a small piece of pottery (context 6004) in Fabric 1, and a fragment of baked clay (find no. 6003b, context 6004) were recovered.



ILLUS. 31 Selected Late Bronze Age/Early Iron Age illustrated ceramics from Fin Cop, Trench 2

DISCUSSION

Other than the possible fragments of Neolithic Peterborough Ware, the earliest pottery from Fin Cop is the LBA/EIA assemblage from Trench 2 and Test-Pit 3 (Illus. 31) close to the hill's summit, attesting to activity in the early centuries of the first millennium cal. BC. Several fragments of daub (Find nos 2142–2146) amongst these finds suggest the possibility of a structure, such as an oven or house wall, in the vicinity. The residues from two sherds (small finds 2198 and 2200) were radiocarbon dated to the first half of the first millennium cal. BC (810–555 cal. BC and 820–620 cal. BC at 95% confidence, see Table 3), although at the 68% probability both could date to the eighth century cal. BC.

The nine illustrated sherds (Illus. 31) representing at least seven Late Bronze Age/Early Iron Age vessels, three in Fabric 1 and four in Fabric 2, are stylistically similar. For instance decoration on sherd 2008 in Fabric 1 is similar to 2001 and 243 in Fabric 2; and rim 2021 in Fabric 2, although from a smaller vessel, is close in shape to that of rim 2176 in Fabric 1. The differences between Fabrics 1 and 2 may represent different family or tribal groupings obtaining clays and tempers from different sources and possibly at different periods of time, but such variation is not unusual on hillfort sites. For instance, at Mam Tor hillfort, petrological thin-sectioning demonstrated comparable fabric differences between sherds with igneous inclusions in that some, but not all, also contained quartz inclusions (Guilbert and Vince 1996, 53).

Comparisons with Mam Tor include decoration (e.g. Fin Cop 2001 and 2043 with Coombs and Thompson 1970, figs 18.1; 19.1 and 9; 25.1) and forms (e.g. 2028 with ibid., figs 17.6 and 20.1). Radiocarbon dates from the Mam Tor house platforms (ibid., 44) were obtained from samples of bulked unidentified charcoal, but are likely to be accurate enough to provide *terminus post quos* for the houses of 1620–1010 cal. BC and 1700–1020 cal. BC respectively, suggesting occupation on the site in the Late Bronze Age prior to the construction of the hillfort. Barrett has suggested that the Mam Tor pottery was related to a plainware southern British tradition as well as a northern one from *c.* 1000–800 cal. BC (1980, 44–47).

Closely comparable pottery forms were also excavated from house sites on Gardom's Edge (Beswick 1995; 1999; 2003) from which a series of radiocarbon dates indicate activities spanning several hundred years during the first quarter of the first millennium cal. BC (John Barnatt pers. comm.). The limited stratigraphy in the thin moorland soils at Gardom's Edge and the well-known difficulties in dating ceramic styles of this period in the north and Midlands (Barrett 1979, 44; Knight 2002, 127) forestalled any closer dating of elements of this assemblage, but they nonetheless provide a directly comparable assemblage to the Fin Cop material.

Many of the sherds (13% — twenty-seven) from Trench 2 and Test-pit 3 have visible burnt food residues adhering, usually on their internal surfaces, indicating that the jars and bowls they represent were used in the cooking and serving of food. These activities are likely to have taken place within or close to Trench 2 because of the density of pottery sherds found here in comparison with the other trenches, and because of the overall condition of the sherds. Of the 207 sherds found here 17% (thrity-five) were large (i.e. over 10g in weight) and 13% (twenty-eight) in average

condition (twenty-seven: i.e. slight abrasion on surfaces and edges) or fresh (one: i.e. no abrasion on surfaces and edges; this example, find no. 2001, was found protected by a rock crevice), suggesting there had been no movement (fresh) or relatively little movement (average) since initial breakage and discard.

On stylistic grounds the barrel jar from Trench 1 appears to be later in date than the material from Trench 2 and Test-Pit 3. The barrel jar is stylistically more closely related to pottery of the second half of the first millennium cal. BC which is consistent with the dates for the human remains found in the same context. The Beaker period date that has been returned from a residue sample from this barrel jar (OxA-23583, see Table 3) is not consistent with this type of pot, and therefore is considered to be an anomalous date.

The term 'barrel jar' was coined by Harding (1972, 99) for one of the most widely occurring pottery forms in the Iron Age which had a long life, particularly in the north (Challis and Harding 1975, 74, 97). The form encompasses the globular and ovoid jars which appear progressively in the earlier La Tène Iron Age (Knight 2002, 131; from *c.* 450 cal. BC) into the mid-Iron Age (Gibson 2002, 131; *c.* 350 cal. BC) and beyond, and in northern Britain into the early Roman period among coarser Iron Age wares. An example from the southern Pennines with an incurved rim, not dissimilar to the that from Fin Cop, is from Harborough cave (Challis and Harding 1975, 75; fig. 5, 15), which was utilized in the mid- to later first millennium cal. BC. A range of more open and simple forms from the Peak District includes a jar from Winster (ibid., fig. 6, 12) which was found with two inhumation burials and dated, on the basis of the associated artefacts, to the late Iron Age, that is, the second century cal. BC to early second century AD (Beswick and Wright 1991, 54).

The broken Fin Cop jar (find no. 1131) was found in the wall destruction deposit in the rock-cut ditch (context 1004) close to a skeleton which had evidently been dropped or thrown into the ditch. It is unclear whether the two deposits are related but there is little formality evident for either in their manner of deposition. The jar, however, could have been current at the same time as the mid-Iron Age date for the skeletons (1 and 3) found in the same context (see Brightman et al. this article).

The difficulties of dating coarse wares of the first millennium cal. BC without the help of radiocarbon dating are well known (Beswick 2010; Gibson 2002, 129). Stylistically everted rims, such as that on sherd no. 1058 from Trench 1, are found on Late Bronze Age/Early Iron Age storage jars, as for example from Mam Tor hillfort (Coombs and Thompson 1979, e.g. fig. 17.6). However, smaller, angular shouldered bowls and jars with everted rims become increasingly common from the Early Iron Age (Elsdon 1989, 17) and the smoother finish and likely size of this vessel, on balance, suggest a date around the mid first millennium cal. BC. Fabric 4 is interesting because of its derivation from sources on the limestone plateau, of which Fin Cop forms a part, unlike Fabrics 1 and 2. This supports the suggestion that the hill may have been accessed by different local groups during the first millennium cal. BC or that the occupants of the hillfort had trade and exchange links with neighbouring groups.

Rim sherd no. 1052, and the possibly related sherds described above, all from Trench 1, are from a type of coarse, thick, biconical storage jar familiar from hillfort sites such as Mam Tor (Coombs and Thompson 1979, figs 17.1, 22.1) and Staple

Howe, East Yorkshire (Brewster 1963, figs 38.5, 40.4), and can be assigned to the first half of the first millennium cal. BC, as was the dated pottery from Trench 2. The rim sherd was found in the counterscarp dump (context 1003), and the other sherds came from the disturbed area of the hillfort's wall (context 1002). This supports the probability that the creation of the defences disturbed earlier occupation evidence, which then became incorporated into the defences in this area of the site.

Finds from Trench 6 are too fragmentary to be informative, but again suggest earlier occupation in the vicinity of the defences. The few finds of pottery from Trench 3, including a decorated rim sherd in Fabric 1 and two body sherds in Fabric 2, provide further evidence for occupation in the first half of the first millennium cal. BC close to the top of the hill as Trench 2 was immediately adjacent.

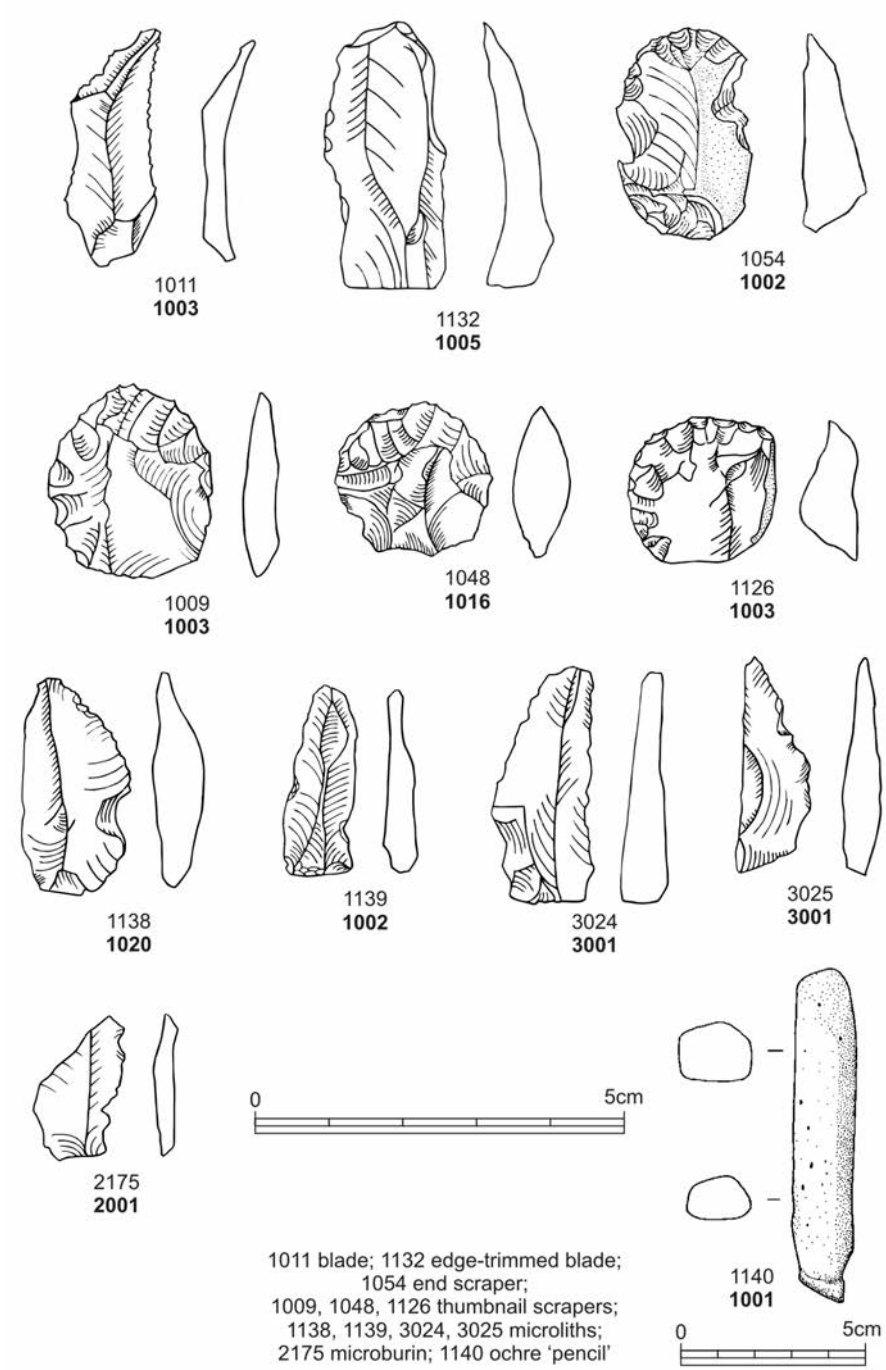
LITHICS AND OTHER SMALL FINDS

by Clive Waddington

A range of small finds other than ceramics was recovered during the excavations at Fin Cop. The finds are summarized in Table 7 and the full lithic catalogue is contained in the site archive. By far the most common artefacts were chipped pieces of chert and flint which have resulted from activity prior to the Iron Age and the construction of the hillfort. The material all has the characteristics of earlier prehistoric lithic assemblages and no material was identified that could be considered to have the attributes of a first millennium cal. BC assemblage as defined by Humphrey and Young (1999). The chipped stone material from the excavation trenches accounts for 424 pieces out of a total number of 462 prehistoric artefacts.

The chipped stone artefacts were also by far the dominant finds from the test-pits producing 590 pieces. The sheer volume of material is surprising, producing an overall average of 11.8 lithics per pit, although in reality the range varied from no pieces in Test-pit 39 to fifty-seven pieces in Test-pit 9. This number is undoubtedly a minimum estimate as a strict and conservative approach was taken to assessing which chert pieces were accepted as being modified by human hand: any of the several thousand more pieces without sufficient evidence that they had been deliberately shaped were excluded. The criteria that was looked for to make a positive identification of a piece of chert having been worked included the presence of features such as bulbs of percussion, retouch or utilization, at least two parallel-sided flaking scars and a striking platform, blade scars with bipolar flaking ridge, together with the overall regularity of blade removal scars and the shape of the piece itself.

The range of material is revealing as there is much material from the primary and secondary stages of the core reduction sequence indicating that primary chipping of raw materials took place on the site. Substantial blocks of struck chert were also found providing evidence for the primary working of quarried material. The number of utilized, retouched and finished tools recovered was notable, numbering 102 pieces (17.3%). These pieces show quite a diversity of types. The tools are predominantly utilized, edge trimmed and retouched blades and flakes (eighty-six pieces) but there are also nine scrapers, a microlith and probable microlith, a microburin, a piercer and two probable piercers, a burin and a probable burin.



ILLUS. 32 Selected lithics made on flint, chert and ochre recovered from the test-pits and excavation trenches

The lithic assemblage from the test-pits (Table 2) and most of those from the excavation trenches (Table 7) clearly relate to a blade-based manufacturing technology (Illus. 32), although this concern for blade production is undoubtedly affected by the constraints imposed by the raw material. The chert is very coarse grained and flakes off in thick chunks giving rise to stubby, and often irregular, forms, but blade forms nonetheless. The chert has to be struck very hard to detach a flake and therefore there is ample evidence for hard hammer-working, although it is notable that despite having to be hit very hard this type of chert does not readily produce a bulb of percussion. Most notably, several cores, blades and flakes have detachment scars on their surfaces resulting from bipolar flaking. The use of bipolar flaking is typical in areas where the locally available raw materials tend to occur in small-sized nodules and where coarse material is used. Some of the flakes have been modified and this usually takes the form of light edge-trimming rather than more controlled retouch, possibly using a soft hammer. The few cores tend to be irregular multi-platform types but one was a tiny opposed platform core and one pyramidal. Overall, the assemblage reveals a chert-working area where chert-bearing limestone occurs close to the surface. The knapping strategy was oriented around a blade-based manufacturing tradition, with opportunistic knapping common, and which took account of the irregularities of the raw material available.

The chert comes in a range of colours although the material on and around Fin Cop tends to occur in various shades of grey, which can be loosely classified into light, medium and dark. The most common colour is a medium grey material that is typically coarse grained and opaque. The light grey material forms the next most common colour and again this tends to be coarse grained and opaque. The dark grey material ranges from a typical dark grey to an almost black colour. The darker the material the more the material tends towards a finer grain. There is much less of this higher quality material in the assemblage.

Mesolithic chipped chert and flints were also found within the topsoil and stratified layers within the excavation trenches (Table 7). Within the topsoil of Trench 1 occasional chipped chert fragments were found together with a slender piece of red ochre with a chamfered end forming what can best be described as an ochre 'pencil' (Illus. 32). This is an interesting find that could be related to the Mesolithic activity on the site as similar ochre pieces have been found on other Mesolithic sites such as Howick in Northumberland (Waddington 2007). In addition to the Mesolithic material there were two fine examples of 'thumbnail scrapers' (Illus. 32) typical of the Beaker period found in Trench 1. Their presence in this trench coincide with the Beaker period dates on residual organic material from the primary ditch silt suggesting that the construction of the rampart in this area during the Iron Age disturbed pre-existing Beaker period deposits.

Lithic scatters in topsoil are typically 'mixed', meaning that there are pieces present dating to different periods. This is because locales regularly returned to over time become foci for discarded material which accumulated to form scatters of material that represent a palimpsest of human activity, sometimes over several thousand years. The lithic assemblage so far recovered from the test-pits across the Fin Cop topsoil is remarkably homogenous and most can be confidently ascribed to the Mesolithic

TABLE 7 Summary of small finds by context

Trench finds register (by context)

CONTEXT NUMBER	1001	1002	1003	1004	1005	1012	1013	1015	1016	1017	1018	1020	1021	2001	2002	2006	2010
Slag			1														
Post-medieval pot	1													1			
Pipe stem														1			
Glass	2													1			
Ochreous material	1																
Iron work	5		1											1			
Burnt clay			1						4	5	1		1				
Perforated ceramic/stone?																	
Animal tooth																	
Number of chert artefacts	15	1	6	1	7	0	66	1	1	2	0	1	1	59	1	2	0
Number of flint artefacts	6	3	9	0	2	1	0	3	2	1	0	0	0	4	4	0	0
Number of other lithics	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	1
TOTAL LITHICS	21	4	15	1	10	1	66	4	3	3	0	1	2	65	5	2	1

Trench finds register (by context) cont'd

CONTEXT NUMBER	3001	3002	3004	4001	5001	5002	5003	5004	5013	6002	6004	7001	7002	8001	TOTALS
Slag															1
Post-medieval pot					2					2					6
Pipe stem					1										2
Glass															3
Ochreous material															1
Iron work															7
Burnt clay											3				15
Perforated ceramic/stone?			1												1
Animal tooth						1									1
Number of chert artefacts	102	15	33	21	7	3	1	4	4	2		2	6	6	370
Number of flint artefacts	6	0	0	0	2	0	2	0	0	1		0	0	0	46
Number of other lithics	3	0	0	0	0	0	0	0	0	0		0	0	0	8
TOTAL LITHICS	111	15	33	21	9	3	3	4	4	3		2	6	6	424

period, although there is a Neolithic–Early Bronze Age component (see below). The Neolithic–Early Bronze Age material is all made of flint whereas the Mesolithic material is almost entirely of chert.

The lithic assemblage from the trenches is directly comparable to the assemblage of material recovered from the test-pits: mostly chert but with significant numbers of flint artefacts. The range of material was broad (see Table 7) including thirty-one cores, fifty-seven retouched, edge-trimmed and utilized pieces, nine scrapers, four microliths and a microburin. The majority of the assemblage was oriented around a blade-based technology directly comparable to that noted in the assemblage from the test-pits. The presence of diagnostic pieces, such as several of the cores, scrapers and the microliths and microburin, indicate an assemblage that is predominantly Mesolithic in character. This material augments the picture provided by the test-pit lithics, except in this case the material from the excavation trenches had been reworked into the Iron Age hillfort deposits and is clearly residual.

Other finds included fifteen fragments of burnt clay, seven fragments of iron objects, six sherds of post-medieval pottery, together with the occasional fragment of clay pipe stem, glass, slag and animal tooth (Table 7). Apart from the prehistoric pottery described above and the lithics, the other finds are all considered to be relatively modern and are otherwise unremarkable.

HUMAN REMAINS

by Kate Mapplethorpe with a contribution by Alexandra M. Thornton

INTRODUCTION

Several assemblages of human bone were found in the main rock-cut ditch of the hillfort within the wall destruction deposit in Trenches 1 and 5 (Table 8). The remains were exposed, cleaned, recorded and lifted for osteological analysis and radiocarbon dating. Full skeletal inventories and a detailed osteological report are contained in the project archive report (see Mapplethorpe 2010).

METHODS

The methods applied to the analysis of the skeletal remains correspond to those recommended by Brickley and McKinley (2004). A skeletal inventory of the remains was produced in order to determine the minimum number of individuals within the assemblage. The completeness and surface preservation of the skeletons was also recorded and a dental inventory was produced using the Zsigmondy system (van Beek 1983, 5). A summary table of these results is included below (Table 8).

The age at death of the skeletal remains was determined using pubic symphysis degeneration (Brooks and Suchey 1990), the auricular surface morphology (Lovejoy et al. 1985), sternal rib end degeneration (Iscan et al. 1984), fusion of the medial clavicle (Cox and Mays 2000, 65), dental development (Ubelaker 1987) and dental attrition (Miles 1963). The ages of the juvenile remains were determined using dry bone measurements of various bones (Fazekas and Kósa 1978).

TABLE 8 Summary of human skeletal elements

INDIVIDUAL	% SKELETON PRESENT	DENTITION	GRADE OF AVERAGE PRESERVATION	ESTIMATED AGE	ESTIMATED SEX
Skeleton 1	38	13/32	3	25–35	Probable female
Skeleton 2	<1	0/20	4	Neonate or young infant	
Skeleton 3	50	31/32	3	20–25	Female
Skeleton 4	1	0/20	2/3	Perinate or possibly neonate	
Skeleton 5	12	5/32	4	20–30	
Skeleton 6(1) and 6(2)	20	0/20	3/4	Neonates or possibly perinates	
Skeleton 7	7	6/20	3	2 years ± 8 months	
Skeleton 8	60	25/32	3	15–16	

The sex of a skeleton is established by using many sex determination methods which particularly focus on the pelvis, the cranium and mandible. These areas of the skeleton are used as the morphological changes of the pelvis and the skull are of primary importance in the determination of sex (Brinkley and McKinley 2004, 23). The overall shape of the pelvis, the greater sciatic notch shape, pubic symphysis height, the sub-pubic angle, the sub-pubic concavity and morphology of the ischio-pubic ramus were all examined to aid with determination of sex of the skeletons. For the skull, the mental eminence, the general mandibular shape, the nuchal crest, the supra-orbital ridge and the supra-orbital margin were used.

Analysis of the stature of the skeletons was undertaken using statistical regression formulae developed by Trotter and Gleser (1952, 1958). Furthermore, all of the bones were examined in order to identify any pathological lesions on the bone.

SUMMARY

The human remains from Fin Cop consist of the remains of at least nine individuals recovered from the wall destruction deposit within the rock-cut ditch of the fort. A further five have been found in the wall destruction layer filling the rock-cut ditch in Trench 9, but as these were excavated as this paper goes to press these are not reported on further here (except for a short summary in the Postscript).

Skeleton 1 was found in Trench 1a and was mostly complete and articulated and was a probable female aged between twenty-five and thirty-five years at death. She had localized areas of inflammation on her clavicle, ribs, left tibia and right fibula

which had not healed indicating minor injuries such as knocks or bruising immediately prior to death. There was no evidence of trauma, cut marks or animal gnawing on the bones and therefore the cause of death must not have left any visible trace on the skeleton. The skeleton did not have evidence for significant degenerative joint disease, and had evidence of poor dental hygiene.

Skeleton 2 was found in close proximity to Skeleton 1 and consisted only of a scapula and a fragment of cranium. From the size of the scapula it is possible to estimate that the remains belonged to a neonate or young infant. No pathology was visible.

Skeleton 3 was also found in the same wall destruction deposit in the rock-cut ditch in Trench 1 and was estimated to be an adult female of approximately twenty to twenty-five years of age. She was mostly complete and articulated. Trauma was evident in the form of a cut mark on the left medial cuneiform and some peri-mortem bruising or infection on the leg bones was also noted (Illus. 33). The teeth showed evidence of poor dental hygiene, seen in the form of calculus on all the teeth and a large carious lesion in the upper right first molar. There was also an unusual wear pattern on both upper first molars, indicating an occupational activity of some sort. The teeth show enamel hypoplasia and a cracked tibia shows Harris lines of arrested growth, both indicative of malnutrition or stress.

Skeleton 4 was found in close proximity to Skeleton 3 and was incomplete, consisting only of two petrous portions and a fragment of maxilla. The bone measurements suggest a perinatal individual, although alternative identification as a neonate cannot be wholly discounted. No pathology was visible.

Skeleton 5 was found in Trench 5, close to the surface in the destruction deposit in the rock-cut ditch, disarticulated and commingled with Skeletons 6(1), 6(2) and 7. It was incomplete, but an age estimate of twenty to thirty years based on the teeth was possible. Enamel hypoplasia was present on the teeth but no other pathology was visible.

Skeletons 6(1) and 6(2) were found in Trench 5, commingled with Skeletons 5 and 7. The remains consist of the bones of at least two individuals. The bone measurements suggest two neonates, although alternative identification as perinates is not discounted. No pathology was visible on any bones from the assemblage.

Skeleton 7 was found commingled with Skeletons 5, 6(1) and 6(2) in Trench 5 and consisted of the disarticulated and incomplete remains of a child of around two years of age (plus or minus eight months). No pathology was present.

Skeleton 8 was found in Trench 5, close to the remains of Skeletons 5, 6(1), 6(2), and 7. The skeleton was mostly complete and articulated and was estimated to be of a teenager around fifteen to sixteen years of age. Due to this young age, the estimation of sex was not possible. There was evidence of poor dental hygiene in the form of calculus. Also on the skull is a small abrasion surrounded by woven bone indicating an earlier scalp injury, and evidence of iron deficiency in the form of cribra orbitalia in the superior aspects of both orbits. The left clavicle had been broken and had healed (but not fully remodelled) by the time of death, however the bone had not been set at the correct angle, creating a slight deformity in the shoulder which would most likely have been visible. There is also evidence of trauma or infection on the shafts of

ILLUS. 33 The left medial cuneiform of Skeleton 3 with a narrow groove consistent with a sharp force traumatic injury immediately prior to death

three metatarsals in the form of new woven bone growth. The bone has not been remodelled, possibly suggesting an injury a few days prior to death.

A large number of the remains are children, and the adults that were able to be confidently sexed were female. This may suggest that women and children were selectively disposed of. Skeleton 8, an adolescent or young adult, may be that of a male. The presence of a cut mark on the left medial cuneiform of Skeleton 3 indicates a sharp force injury to the foot prior to death. The presence of dental disease on a large number of the adult teeth affected by calculus indicates a diet that included honey or sugary fruit. The presence of dental enamel hypoplasia and Harris lines also suggests periods of malnutrition. The cribra orbitalia on the skull of Skeleton 8 indicates an iron deficiency that may be related to diet, or alternatively to a long-standing medical condition.

ANIMAL BONE

by Andy Hammon

The largest single component of the assemblage (110 fragments) comprised rabbit bones from the counterscarp bank in Trench 6 [6004]. The rabbits are intrusive in all likelihood, having burrowed into the low counterscarp bank; multiple individuals, plus better preservation and lack of root etching, supports this interpretation. Rabbits do not appear to have been widely established in Britain until the late twelfth century AD and only one Iron Age site has produced tentative evidence of contemporary rabbit; Lynford in Norfolk (Sykes and Curl 2010).

The remaining specimens represent the major domestic animals (cattle, sheep/goat, pig and equid) and small wild species (mostly rodents), plus one red deer antler fragment. The sheep and/or goat remains came from the primary ditch silt in Trench 1 [1021] and from the main wall demolition deposit immediately above [1004]. The cattle and pig fragments also came from the wall demolition deposit [1004] in Trench 1 whilst the horse fragment and the songbird remains came from the wall destruction deposit in Trench 5 [5003]. The red deer antler fragment came from the pre-hillfort soil layer in Trench 5 [context 5014]. Based on tooth wear and post-cranial epiphyseal fusion, all the major domesticates were either sub-adult or adult. Domestic animals were almost exclusively represented by cranial, rib and lower-limb fragments which might indicate slaughter and butchery waste, although this is highly speculative due to the size of the assemblage. It was possible to fully speciate the sheep (Ovis aries) mandible using the morphological criteria of Halstead, Collins and Isaakidou (2002) to distinguish the molars. Based on tooth eruption and wear, the animal was approximately two to three years old when it died (following Payne 1973). Based on the morphology of the canines in the pig mandibles, it was possible to ascertain that the individual was male. Overall, little can be inferred from this regarding husbandry practices and utilization. The rodents and frog/toad specimens could be contemporaneous with the deposits or be intrusive. The small songbird specimen derived from a sparrow-sized individual. No butchery marks or pathological lesions were noted on any of the specimens, although the poor preservation of many specimens will have inhibited their identification.

Due to the small size of the assemblage, and its general poor state of preservation, only very tentative observations can be made regarding agricultural practices and socio-economic conditions at Fin Cop. The remains of sub-adult and adult domestic animals, possibly representing slaughter and butchery waste, were present at the hillfort. The assemblage has, however, proved useful in demonstrating the survival and nature of the animal remains at Fin Cop and any future excavations could produce useful assemblages.

BOTANICAL MACROFOSSILS

by Lorna Elliott and Louisa Gidney

Samples were taken from the wall destruction deposit (1004) in Trench 1, the primary ditch silt layer (1012) in Trench 1, the pre-hillfort occupation layer beneath the hillfort ramparts (1013) in Trench 1, and the pre-hillfort layers (5013) and (5014) in Trench 5. A core sample was taken from a primary ditch silt of a linear ditch further down the hillside, possibly unrelated but excavated previously by Wilson and English (1998), but no datable material was recovered. The objective of the palaeoenvironmental assessment was to establish the potential of the samples to provide information about diet, land use and palaeoenvironment of the site, and to select material suitable for radiocarbon dating.

Small fragments of charcoal were present in the flots and residues from four samples, although due to the small fragment sizes distinguishing between timber and roundwood was not possible. Context (1012), the primary ditch silt in Trench 1,

contained several fragments of yew (*Taxus baccata*) and hazel (*Corylus avellana*) charcoal, together with a fragment of diffuse-porous (short-lived species) charcoal. The pre-hillfort land surface in Trench 1 (context 1013) also produced fragments of yew, hazel and ash (*Fraxinus excelsior*) charcoal. A small fragment of blackthorn (*Prunus spinosa*) showing signs of vitrification, was present in the pre-hillfort soil layer in Trench 5 (context 5014). Charcoal was absent from the remaining bulk samples. The small charcoal assemblage indicates that yew, hazel, ash and possibly blackthorn are likely to have grown in the local vicinity around the time of the hillfort construction. Yew often occurs on well-drained limestone (Stace 1997) and is a useful wood, being both dense and tough, but also elastic and good for firewood (O'Donnell 2007). Ash is a useful structural timber (ibid.), while hazel was traditionally used for wattling due to the flexibility of the young stems (Orme and Coles 1985).

Small charred monocot stems were recorded in the pre-hillfort soil layer, contexts (1013) and (5013), together with a charred rhizome in context (1013). They may indicate the burning of turves or the clearance of vegetation prior to the hillfort rampart construction.

DISCUSSION

Fin Cop is an enigmatic site that has invited the curiosity of archaeologists and antiquarians for over four centuries. Although this study was focused on investigating the Iron Age hillfort, about which little was previously known, the excavations unearthed a much deeper and richer history for the site than was anticipated based on the visible surface evidence. These earlier remains will be briefly discussed as any in-depth consideration of the previously investigated remains, such as the Beaker and Bronze Age period cairns, form a separate study in their own right. Throughout prehistory different groups of people frequented the site and this recurring use of the hilltop, albeit for different reasons at different times, allows for it to be considered what has been termed a 'persistent place' (Schlanger 1992) in the landscape. It is not clear whether the use of the hilltop took place on a near-continuous basis or whether pulses of activity at different times have left their archaeological signature. Either way, it seems clear that the hilltop was held to be significant by successive generations of people and that the site's use changed over time. After the destruction of the hillfort much of the significance of the hilltop appears to have been lost with the next evidence for activity being medieval ridge and furrow agriculture and the body of a young male found in the cave known as 'Hob's House' located below the hillfort and dated to the Anglo-Norman period (Brightman et al. this article). The destruction of the hillfort can therefore be seen as a watershed moment in the history of this place — one which removed, probably intentionally, some of the significance of the site for ensuing generations.

MESOLITHIC

The discovery of a Mesolithic chert quarrying site is a rare find, particularly in England, and bodes well for Mesolithic studies in the region. The assemblage of material from the test-pits included large numbers of primary flakes and large, struck

chert nodules and this is in keeping with the expected assemblage variability for lithic extraction or 'quarry' sites. Although it is possible that some Mesolithic settlement may have taken place on the hilltop from time to time, particularly given its strategic location and wide vistas, it is unlikely to have been much more than logistical camps (see Smith 1990), to provide shelter during chert extraction or hunting forays. Therefore, Mesolithic activity on the hilltop is likely to have been episodic with chert-winning being one of the main purposes. The roughouts and flakes were presumably transported from the hilltop to nearby settlement sites where they would be fashioned into tools. The diagnostic chert tools that could be identified were generally crude, their form being partly dictated by the flaking qualities and imperfections of the raw material and consequently they do not conform precisely with the more typical typological sequences that are well known for the flint tools of the Mesolithic. Therefore, establishing dating control for the Mesolithic activity on Fin Cop currently remains problematic. The potential for *in situ* Mesolithic deposits to survive on the hilltop is quite good and so any future excavations within the fort area could be used to address the timing and scale of Mesolithic activity.

Traditionally, it is the flint tools that are most commonly recognized as forming the basis of the Mesolithic tool kit in the Peak District. This is not surprising given the difficulty of discriminating between anthropogenically worked chert and the natural 'shatter' that can break off in blade-like form. Chert artefacts are, however, now being recognized with more frequency, such as those found during large-scale fieldwalking programmes across the eastern Peak District by Hart (1981) and the ARTEAMUS group (John Barnatt pers. comm.), and those recently recovered during fieldwalking and excavations at Whirlow Hall Farm (Waddington 2011). These assemblages show that different types of cherts were being exploited for the production of stone tools, and this is probably related to proximity and access to the nearest chert source. The chert at Fin Cop is particularly coarse-grained whilst some of the finer-grained Peak District cherts allow for much more subtle flaking comparable to that which can be achieved on good quality flint. Having established the presence of a surface chert-winning site at Fin Cop this opens up the possibility that other similar sites may yet come to light in the region. Discovery of such sites would aid understanding of the pattern of raw material procurement during the Mesolithic and this could yield useful insights into the nature of exchange networks through time and the character of resource extraction camps and their place in the wider settlement pattern.

NEOLITHIC

Neolithic activity on the hilltop is indicated by the fragments of a recycled ground and polished stone axe head found unstratified in the topsoil of Trench 2 and the probable sherds of Peterborough Ware pottery recovered from Trenches 1 and 3. The two axe head fragments are made from Langdale Tuff from Cumbria (Group VI). The larger of the two pieces has blade scars on its surface showing where the axe head had been rechipped to produce blade blanks. This is a type fossil associated with the Neolithic and demonstrates not only Neolithic activity at Fin Cop, but also that occupants of the site were linked into exchange networks that stretched as far afield as Cumbria.

Several Neolithic flint implements were found within the fort following fieldwalking in the 1940s. This included a bifacially flaked flint knife. A Neolithic scraper was found a short distance outside the fort in a residual context in a later ditch fill examined in 1993 (Wilson and English 1998).

What the nature of the Neolithic activity on Fin Cop comprised remains more puzzling than that for the Mesolithic period because these few, fragmentary remains do little else than document a presence sometime during the 4th and 3rd millennia cal. BC. Consideration must therefore be given to the wider context of Neolithic activity in the area. The Peak District is well known for its important and diverse group of Neolithic monuments. These include the Early Neolithic long cairns, megalithic chambered 'tomb' sites and the Long Low Bank Barrow, the smaller chambered tombs, such as Five Wells and Greenlow, and the well-known later Neolithic henge sites of Arbor Low and the Bull Ring. The pattern of settlement is, however, much less clearly understood. The site at Lismore Fields on the outskirts of Buxton, 13 km west of Fin Cop, is the only site which has so far produced structural evidence for what is probably a Neolithic settlement.

Consideration of its landscape position may be the most useful clue for understanding how Fin Cop was used at this time. Being high up and very exposed the hilltop is not an obvious location for early cultivation. Although cultivation is possible, it is unlikely to have been a sustainable activity. It is therefore unlikely to have formed a permanent settlement locale. No certain Neolithic burials have yet been found on Fin Cop — all those investigated by previous antiquarians suggest they are of Beaker and Early Bronze Age date. Upland locales are used throughout the Neolithic for the siting of ditched and walled enclosures and it remains possible that Fin Cop could yet be masking the remains of some form of Neolithic enclosure. Such sites are usually considered to have been used on a seasonal or episodic basis (Oswald et al. 2001; see also Mudd and Brett, this volume) although none are currently known from the Peak District. The construction of Iron Age hillforts over Neolithic enclosure sites is well known in other parts of the country, as at The Trundle, Maiden Castle, Ryebury, Hembury and possibly Hambledon Hill and Maiden Bower (see Oswald et al. 2001, 139–42), and it is conceivable that a similar situation could exist at Fin Cop. Thus the landscape setting of Fin Cop and the discovery of Neolithic material around its summit open up the possibility that some form of enclosure may have girdled the hilltop in Neolithic times. The unusual scarp edge enclosure at Cratcliff Rocks has been identified as another contender for a Neolithic enclosure in the Peak District (Makepeace 1999), but this site is yet to be tested by excavation.

Although we are not yet in a position to characterize the type of Neolithic activity that took place on Fin Cop it is worth noting that its location overlooking a strategic entry point on to the fertile limestone plateau suggests it is a place that may have been of some significance. The long cairn on Longstone Moor lies just 3.6 km away to the north-east, while the Five Wells chambered tomb lies only 5 km due west and is visible from the northern part of the Fin Cop summit. Arbor Low lies only 7.5 km away slightly west of south and is just visible from the highest point on the Fin Cop summit. The stone axe head and Impressed Ware pottery-producing site at Middle Hill, Wormhill (Hart 1981, 46–47), is situated just less than 9 km away to the north-

west. Many other Neolithic sites identified through fieldwalking and field survey are also located in close proximity, which together suggest that Fin Cop may have formed an important part in the structuring of the landscape in Neolithic times. If there is surviving evidence for Neolithic settlement in the well-preserved soils and sediments at Fin Cop then future investigations have the potential to add important new knowledge to our understanding of the Neolithic in the Peak District.

BEAKER PERIOD AND EARLY BRONZE AGE

Beaker period and Early Bronze Age activity is evidenced by the group of burial cairns on the summit of Fin Cop (Rooke 1796, 328; Bateman 1848, 26; Harris 1925), together with the thumbnail scrapers and the two Beaker-period radiocarbon dates (Table 3) on residual charcoal material from the base of the rock-cut ditch in Trench 1. The cairns did not form a part of this investigation, but the new artefactual and dating evidence for this period suggests that there are more buried remains dating from this period that survive across the site over and above the turf-covered burial cairns. Some of these remains were disturbed during the construction of the Iron Age fort and it is this material that was encountered during the excavation. Therefore, although residual, their discovery shows that Beaker period and Early Bronze Age activity extends across the hilltop and is not just confined to the summit of the hill. Whether this could denote activity related to occasional ritual observance and ceremonies around the cairns, or perhaps Early Bronze Age upland settlement, is not yet able to be demonstrated, but the implication for more widespread activity across the site during this period is clear. Given that elsewhere in the Peak District there is evidence for Early Bronze Age burial cairns amongst settlement and field systems, for example on Big Moor on the East Moors (Barnatt 1987; 1999), it is conceivable that Beaker period and Early Bronze Age settlement remains could also exist at Fin Cop, but set back below the exposed summit of the hill, and this could account for the material encountered 100 m or so away from the cairns during excavation of the hillfort ramparts in Trench 1.

LATE BRONZE AGE–EARLY IRON AGE

Late Bronze Age-Early Iron Age activity is evidenced by the assemblage of over two hundred pottery sherds from the fort interior within Test-pit 3 and Trench 2 and potentially the rock-cut pits and daub spatially associated with them. Two radiocarbon determinations from the residues on two of these sherds provide early first millennium cal. BC dates (Table 3) demonstrating a pre-hillfort phase of occupation on the site. Whether this activity relates to an unenclosed settlement or perhaps occupation within an, as yet, unrecognized palisaded enclosure remains open to question. Given the span of the radiocarbon dates associated with this activity it is not possible to determine whether there was direct continuity of activity up to, and including, construction of the hillfort around *c.* 400 cal. BC due to the paucity of dating evidence for the earlier phase. Instead, the current dating could suggest a hiatus of activity on the hilltop in the fifth and sixth centuries cal. BC. Nevertheless, continuous occupation remains a statistical possibility, based on the currently available radiocarbon dates, and should

further remains come to light from the interior of the fort this question can be tested by further dating of occupation debris. The presence of rock-cut pits and domestic artefact debris, such as pottery with the residues of food adhering to them, together with the presence of daub which suggests a structural feature, is consistent with occupation of the hilltop rather than just a passing stay.

A similar sequence appears to exist at Mam Tor where Late Bronze Age radiocarbon dates provide *terminus post quos* for two houses within the interior, and other Late Bronze Age signatures were discovered that included ceramics (based on their form and fabric), and metalwork in the form of socketed axe heads. As with Fin Cop the defences at Mam Tor are thought to be later than the Late Bronze Age but at Mam Tor this has yet to be tested by radiocarbon dating. There are many other sites beyond the Peak District where Late Bronze Age phases pre-date Iron Age hillfort ramparts, for example at The Breidden, Dinorben, Grimthorpe, Fenton Hill and Traprain Law (see Waddington and Passmore 2012, 206) to name but a few. That Fin Cop fits into this wider pattern, is significant and shows that the Fin Cop hilltop was considered an important and, no doubt, strategic place from the early part of the 1st millennium cal. BC onwards. Viewed from this perspective the construction of the Iron Age hillfort defences can be seen as the culmination of the 1st millennium cal. BC activity on the hilltop. It is possible that the hillfort could yet have earlier enclosure remains surviving on the site, such as a palisade slot for example, and if this is the case then we are dealing with a much more complex monument than is currently understood. Until there is further testing of the hillfort area by further excavation, the nature and duration of Late Bronze Age–Early Iron Age occupation on the site will remain open to question.

MID-IRON AGE

It is in the Iron Age that the substantial hillfort ramparts at Fin Cop were constructed. The defences consisted of a massive dry stone wall, composed predominantly of white Carboniferous Limestone that had been quarried from the rock-cut ditch that lay immediately outside the wall. Since then these remains have become almost completely turfed-over so as to give this stone monument subdued-looking defences, which to the unknowing observer, would suggest an earthwork rampart rather than a stone wall. Estimating the original height of the wall remains speculative but, given the size of the external rock-cut ditch and the amount of material this would have produced, a height of 3–4 m above the natural ground surface can be suggested. The *in situ* wall foundations sealed a pre-existing ground surface containing fragments of charred monocot stems and a charred rhizome, which may indicate the burning of turves or clearance of vegetation, prior to the construction of the wall.

In both trenches (Trench 1 and 5) excavated over the ramparts the ditch did not appear to have been completed. In the case of Trench 1, large blocks of quarried stone had been detached but were yet to be lifted from the ditch. The short section of outer rampart and ditch, to form a bivallate defence, that was started at the north-east corner of the site is clearly unfinished and together this provides a sound case for viewing the stone walled fort as a fairly short-lived and uncompleted defensive work. At the base

of the ditch in Trench 1, next to the inner face, a small deposit of primary ditch silt survived that contained fragmentary remains of animal bones and a small assemblage of plant remains. The animals present included domestic cattle, pig, sheep/goat as well as horse suggesting the occupants of the fort had access to a range of resources associated with a mixed farming regime. The presence of yew, hazel, ash and probably blackthorn suggest such trees grew in the vicinity of the site while the hillfort rampart was under construction.

The construction of the rock-cut ditch and wall has been dated to *435–390 cal. BC (68% probability)* providing clear evidence for a mid-Iron Age date. The destruction of the hillfort can be dated by the human bones from the wall destruction deposit in the ditch fill, and notwithstanding the effects of the radiocarbon calibration plateau (see above) has allowed the destruction phase to be estimated as falling within the period *355–300 cal. BC (40% probability)*. After the destruction of the hillfort the next phase of activity evidenced on the hilltop is the medieval ridge and furrow agriculture implying that the hillfort was abandoned after its destruction.

The human remains of a minimum of nine individuals were discovered in the two narrow trenches cut across the hillfort ditch. Subsequent to the fieldwork reported here, skeletal remains from a further six individuals were found when a further trench was excavated in the summer of 2012 (see Postscript). In total, the three trenches have together examined a mere 15 m width of ditch and yet they have produced the remains of fifteen individuals — giving on average one individual per metre. This equates to only 4% of the ditch's 360 m length. The very fact that these three trenches were situated at widespread intervals along the ditch circuit indicates that many more individuals are buried within the ditch. If this density were projected for the full length of the rock-cut ditch then there could be in the region of 300–400 individuals buried within it. This volume of individuals is highly significant and allows for comparison with other sites such as War Ditches, Cambs. (Pickstone and Mortimer 2012) where a significant number of individuals have also been found in the lower ditch fill of an Iron Age hillfort

Given the deposition of human body parts in pits and ditches during the Iron Age, including within domestic settlements, the interpretation of the Fin Cop discoveries requires careful consideration. Could the individuals have been deposited there as victims of a mass epidemic for instance? Such a view may seem feasible on first consideration. However, notwithstanding the lack of any evidence for this from the bone pathology it raises the awkward question that if this were the case why was the fort so comprehensively dismantled at the same time? Neither would this interpretation account for why children and women appear to have been selected and why perimortem bruising was found on the bones of some of the individuals, which is consistent with them having entered the ditch either as they were dying or immediately after death, rather than being carefully placed in the ditch as formal burials.

Another alternative is that the individuals were deposited in the ditch as part of some form of religious, sacrificial or symbolic act. For example, Hingley has recently commented that the 'massacre deposits' at Kemerton Camp (Bredon Hill), Ham Hill, Maiden Castle, South Cadbury and Spettisbury might be interpreted as ritual deposits associated with sacred locations (Hingley 2006, 226) and Bowden and

McOmish (1987; 1989) and Hill (1995), amongst others, have argued for hillfort ramparts being primarily symbolic barriers, sometimes emphasized by the deposition of human body parts in boundary features. Such views may indeed have an element of legitimacy, but they could be an oversimplistic generalization as Redfern has recently been able to demonstrate that the Maiden Castle burials, including those from pre-Roman Durotrigan contexts, were killed during conflict which included direct trauma to both men and women (Redfern 2011, 133). Indeed Redfern states that, 'These human remains show that martial events in the Late Iron Age affected both sexes and older subadult age-groups, and that many of these individuals had survived native episodes of violence before the engagement(s) that caused their death' (ibid.). Furthermore, the recent reassessment of the Kemerton Camp 'massacre deposit', also from the hillfort entrance, has shown weapon-related trauma consistent with violent death and the dating of three of the skeletons is consistent with the individuals having died at the same time during the period *c.* 170–50 cal. BC (Hurst and Western 2012). Using a symbolic/sacrifical deposition argument to explain the Fin Cop burials should therefore be seen in the light of this new scientific evidence and its inability to satisfactorily explain why the individuals were casually disposed of in the ditch as part of the intentional destruction of the fort.

The presence of part of a broken Iron Age barrel jar in the wall-destruction deposit near to Skeleton 3 could be used to infer some form of grave good accompanying the individual. The pot, however, was broken and did not appear to have been specially deposited in the ditch, but rather it was situated on its side in the stone rubble fill with no evidence for having been placed, or any kind of cavity having been made for it. This suggests that it entered the ditch broken, or that it broke on deposition with the broken sherds bouncing off and landing further away — as would be the case if it had been dropped or thrown. Such actions would be at odds with the way grave goods typically enter the archaeological record. None of the individuals had any personal items surviving with them, whether metalwork, jewellery or other such items and this may indicate that they entered the ditch stripped of any adornment or valuables and possibly even naked. It is clear, then, that we are not dealing with formal burials or symbolically placed body parts at Fin Cop, but rather a mass burial of fleshed and intact individuals who were casually deposited in the hillfort ditch while the wall was being brought down around them.

If we take a closer look at the burial context and make-up of the skeletal remains further observations come to light. The radiocarbon dating is consistent with the individuals all having died at the same time, although due to the radiocarbon plateau this should be considered likely but not proven. The stratigraphy on the other hand is very clear in showing that the all the bodies were deposited in the ditch whilst the hillfort walls were being deliberately dismantled. This evidence for such intentionality is highly significant and makes a 'ritual' interpretation for the human remains, as something separate from the hillfort destruction, hard to sustain. Given that some of the corpses (e.g. Skeleton 1) had unhealed (peri-mortem) bruising apparent on the bone surfaces of limbs, ribs and collar bones, probably as a consequence of being thrown into the ditch, this indicates that the individuals are likely to have been killed, or fatally injured, immediately prior to their disposal in the ditch. Iron Age body parts

are sometimes found deposited in special locations significantly later than their time of death, but at Fin Cop the individuals that had not experienced post-depositional disturbance were articulated indicating that they were thrown into the ditch fully fleshed. This implies that there was little if any gap between them being killed and their deposition in the ditch. The posture of the individuals is also of importance here. Those individuals that had not been disturbed by post-deposition taphonomic processes had quite evidently been dumped or 'thrown' into the ditch from the outer edge, thus accounting for their haphazard and twisted positions and the lack of concern for them being laid out or arranged as part of a formal burial. In fact the absence of any formal burial rite emphasizes the casual way in which these individuals were disposed of. The juvenile who was discovered at the base of the ditch in Trench 5 in a broadly foetal position with a huge rock over their head could have been thrown in whilst still alive and the rock thrown on to the individual's head to finish them off. The forearms of this individual crossed near the wrists raising the possibility that this individual may have had their arms tied together at the wrists. None of this is consistent with the burial of selected body parts or individuals who had been deceased for any significant length of time before burial.

All the individuals that have so far been able to be identified are women, infants and adolescents which, based on the current sample of corpses, suggests that selection of individuals for execution and disposal took place. Two of the individuals, Skeletons 3 and 8, show evidence for trauma in the form of sharp cut marks to their feet and skull respectively, immediately prior to death, but none show evidence for trauma that could have caused death. This is not unusual in graves of people who have died through inter-personal violence because, as Redfern has noted in her recent Maiden Castle study (Redfern 2011, 131), clinical data shows that the majority of assault trauma affects only the soft tissues (Shepherd et al. 1990). It therefore seems most likely that the women and children in the Fin Cop ditch died from soft-tissue wounds, perhaps by having their throats cut or perhaps by hanging. Accurately identifying the cause of death for the individuals buried in the Fin Cop ditch does, however, remain one of the key outstanding questions for the site.

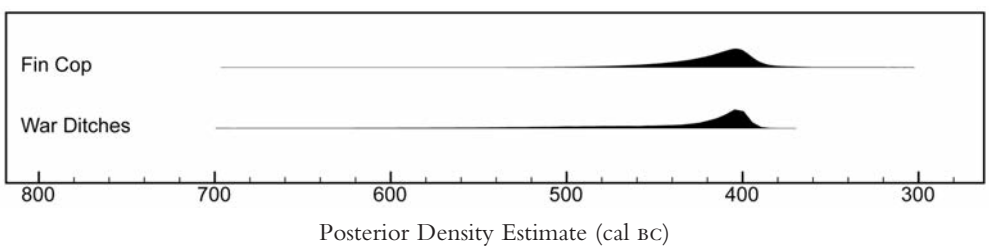
Taking the above information into account, the most likely interpretation that fits the currently available evidence is that the hillfort was deliberately destroyed and the women and children were executed as part of this destruction event, their bodies being dumped in the ditch and the fort wall brought down on top of them. What happened to the menfolk is open to speculation. Their remains could yet be found in the long lengths of, as yet, unexcavated ditch or they may have been absent when the hillfort was destroyed. Alternatively, they may have been captured and taken as slaves or even pressed into military service with the occupying force. Whatever their fate, on current evidence, it appears to have been different to that of the womenfolk and children. Accounting for the broken pottery vessel next to Skeleton 2 could be quite straightforward. Rather than being some form of ritual deposit it might have been in use as part of a victory celebration before being thrown into the ditch with all the other destruction material and bodies of the deceased.

The initial fort rampart is likely to have begun being built in *435–390 cal. BC (68% probability)* and is likely to have been destroyed several decades later, indeed the

bi-modal distribution of the calibration curve suggests that a date for the destruction of the fort and the death of the individuals in the fourth century BC, around *355–300 cal. BC (40% probability)*, is most likely (see Brightman et al. this article). These dates share a very interesting parallel with the dates for the site known as War Ditches in Cambridgeshire where recent investigations have revealed a very similar history to that observed at Fin Cop (Pickstone and Mortimer 2012). At War Ditches, the hillfort construction was dated to 455–390 cal. BC (68%) whilst at Fin Cop it has been dated to 440–390 cal. BC (68%) (see Illus. 34 for comparison), and at both sites the forts were destroyed before completion of the defences, or shortly thereafter. Indeed a fourth century cal. BC date for Fin Cop's demise fits with the other, albeit meagre, evidence currently available for southern Pennine hillforts which Harding has postulated as being abandoned by the later fifth or fourth centuries cal. BC (Harding 2004, 46).

So what does this discovery mean for the study of hillforts and the Iron Age? In recent years several studies have drawn attention to the unsuitability of many enclosure and hillfort sites for practical defence (e.g. Bowden and McOmish 1987; 1989; Hill 1995; Hamilton and Manley 2001; Bowden 2006; Frodsham et al. 2007; Oswald et al. 2008 amongst others), giving way to a trend by some archaeologists to 'pacify' the Iron Age (e.g. Hill 1995; 1996; Lock 2011). Instead, such studies have criticized the 'military' interpretation of these sites and considered such forts, which are now more regularly referred to as 'enclosures', to have been primarily symbols of status, wealth and power, built in such a way as to exaggerate the impressive scale of the defence-works when approached from certain directions. The emphasis in such studies is on understanding them in social terms, perhaps as ways of competing with neighbouring groups for prestige (Frodsham et al. 2007) or as acting as metaphors for managing emotional relationships within groups of people whose interest is in creating a harmonious existence (e.g. Lock 2011). The military function of these sites is regularly downplayed and Iron Age society is portrayed as peaceful, and in some cases even egalitarian, by those keen on 'deconstructing' the Iron Age and presenting a past that reflects their own ideals. In such narratives violence and warfare in prehistory is routinely ignored, explained away or excluded (see for example critiques in Keeley 1996; James 2007; Armit 2011) and inconvenient classical sources and anthropological case studies are typically dismissed out of hand.

The evidence for the intentional and violent destruction of Fin Cop, the killing of women and children and their casual disposal in large numbers in the ditch, suggests



ILLUS. 34 Probability distributions for the estimated date of construction of Fin Cop (*build_hillfort*; illus. 26) and War Ditches (*Boundary start*; Pickstone and Mortimer 2002 fig 11)

a very different experience for some of those living at the time. The partial construction of the second Fin Cop rampart and the choice of a much more rapid construction technique than was used for the main rampart, suggests a community hastily responding to a real threat. The most plausible explanation for this is that the hillfort was sacked as an act of war. Defining what we mean by 'war' is important and in this case it is related to the scale of the violence attested where at least several hundred or more victims, and presumed combatants, are inferred. The alternative explanation for this massacre, that it was some kind of mass sacrifice of women and children, fails to account for why the fort was so comprehensively destroyed at the same time. It is worth noting, also, that the nearby hillfort at Ball Cross 5.5 km away, revealed evidence for a directly comparable ditch fill sequence with the stone wall having been thrown into the rock-cut ditch as part of what appears to have been a single event (Stanley 1954). Ball Cross, however, is located on a sandstone ridge and this gives rise to an acid geology and soils, and in such circumstances unburnt organic material, such as human bone, rarely survives. In contrast, Fin Cop is located on base-rich limestone which gives rise to a benign chemical environment in which organic material, such as bone, survives well. Could it be that Fin Cop preserves this story well primarily due to the soil chemistry of the site, just like War Ditches, and that one of the reasons why such evidence for warfare has been sparse on other northern sites is because so many of them are located on sandstone and gritstone uplands? There is one other possible hillfort known on the Carboniferous Limestone of the Peak District, Crane's Fort (Hart and Makepeace 1993), which by analogy with Fin Cop, should also have the potential to preserve human bone if, indeed, such material was ever discarded there, but this hillfort has yet to be investigated.

In the light of the Fin Cop and War Ditches (Pickstone and Mortimer 2012) evidence and the Maiden Castle (Redfern 2011) and Kemerton Camp (Hurst and Western 2012) reassessments there is a need to re-look at hillforts from a martial perspective, and particularly when we bear in mind that Iron Age violence is well attested in the classical sources as well as in other areas of the archaeological and anthropological record. In terms of the Iron Age more generally it is hard not to acknowledge that inter-personal violence and warfare did not form a fundamental part of the social fabric at certain times (Sharples 1991a; Craig et al. 2005; James 2007; King 2009; Armit 2007; 2011). If we look at the artefact record we have evidence for a wide array of military equipment ranging from chariots (e.g. Dent 1985), chainmail (Gilmour 1997) and helmets to weaponry which includes, of course, the sword which comes into use at the beginning of the first millennium cal. BC. The highly decorated Hallstatt and La Tène swords indicate these killing tools were also prestige items used by the elite. Evidence from Iron Age graves includes swords, spears and shields being used by male warriors, whilst the huge hoards of slingstones found in pits close to the main gateways at Danebury and Maiden Castle testify to the need for defending at least some hillfort sites in southern England (Cunliffe 2005). Although Whimster drew attention to various 'war graves' associated with hillforts (Whimster 1977; 1981), it has been noted that those from the 'massacre' sites at Spetisbury Rings (Gresham 1939), Maiden Castle (Sharples 1991b, 119–25), South Cadbury Castle (Alcock 1972), Sutton Walls (Kenyon 1953) and Kemerton Camp (Bredon Hill) (Hencken 1938, 21–23)

were all thought to be of Roman, or probable Roman, date. Importantly though, new analysis by Redfern has led her to identify some of the individuals at Maiden Castle as having died in conflict prior to the Roman period (Redfern 2011), whilst the Kemerton Camp 'massacre' has been dated to *c.* 170–50 cal. BC (Hurst and Western 2012), and Hill and Woodward argue that the Cadbury Castle 'massacre' deposit may be cumulative (Barrett et al. 2000). Other types of evidence for Iron Age violence include the Iron Age burials at Burton Fleming and Wetwang Slack in Yorkshire that were found with spearheads embedded in them (Dent 1984) and burials at Maiden Castle, Danebury, Rotherley, Gussage All Saints and Harlyn Bay, have shown evidence for trauma, with many wounds being to the head (Cunliffe 2005, 541; Redfern 2011). Indeed skeletons showing evidence for interpersonal violence are not uncommon on Iron Age sites (Dent 1984; King 2009).

Set against this background, the discovery of massacres and rampart destruction at two hillfort sites in an unambiguously mid-Iron Age context at Fin Cop and War Ditches is therefore highly significant for hillfort studies in Britain. The 'cemetery', or 'massacre', deposits mentioned above are typically focused around the entrances into hillforts, although this may be a reflection of where archaeologists have traditionally targeted their excavation trenches. This contrasts with the findings from Fin Cop and War Ditches, where in the case of Fin Cop not only are the bodies disposed of in the encircling ditch, but the entire length of the stone wall appears to have been dismantled and used to bury the bodies and infill the ditch as part of a single event. The action taken at Fin Cop can therefore be seen to be more than just an assault and capture of the hillfort and any associated wealth and resources, but rather it points towards the intentional sacking of the site by an aggressor whose intention was to permanently decommission the site, permanently remove its residents, and destroy the reproductive capacity of the resident population and negate any symbolic power of the site. There was evidently no intention to take over the site, and the comprehensive destruction of the defences suggests far more than just a cattle raid. Perhaps we are witnessing one episode in a concerted campaign, or perhaps a war of subjugation and blood letting, with the intention of demilitarising the area and removing the potential for future resistance or retaliation?

Such a military context does not easily mesh with some recent social narratives of the Early-Mid Iron Age in Britain. Nonetheless it strikes a chord with how Iron Age society and hillfort sites are typically viewed in other academic quarters across Britain and most of Europe. There is plentiful evidence in classical sources for huge military campaigns in and around Europe at this time, whether it be the campaign of Alexander which extended from Macedonia to the Punjab or the sacking of Rome by 'Celts' from central Europe, both of which occurred in the 4th century cal. BC. Reconciling these different narratives provides an ongoing challenge, but with the recent emergence of highly credible evidence for the sacking of hillforts at Fin Cop and War Ditches there is an impetus to regain a balance between understanding hillforts in a social context, and perhaps as spiritually bounded and protected places, on the one hand, and the functioning of some of them as military centres that were occasionally engaged in warfare on the other. The symbolic bounding of these places and the conferring on them of spiritual power could have reinforced, sanctified, and

perhaps sanctioned, their military function, and therefore the symbolic and military qualities of hillforts should not be seen as exclusive (see also Armit 2007). Rather, these superficially different qualities should be seen as not only mutually reinforcing but perhaps as inextricable ways of wielding and protecting power in the British Iron Age. Accommodating active warfare in our narratives of Iron Age life at certain places and at certain times need not require recourse to a model of endemic warfare throughout all of Britain during all of the first millennium cal. BC but it should, at the very least, allow for pulses of warfare at local, regional and even national scales for a wide variety of reasons and at different times.

The widespread enclosure of settlements and the construction of the many hundreds of defended sites across Britain provides yet further evidence for the intrinsic threat of violence and the need to defend people and resources during the Late Bronze and Iron Ages. This said it is quite evident that there is a huge variety of late prehistoric enclosure forms throughout Britain and it has not been helpful that in the past many such sites have been termed 'hillforts', as this undoubtedly conflates monuments of different form, function and age into a single class of site. But of those which display evidence for fortifications, including those in lowland settings, some were no doubt built with the emphasis on their use as a military stronghold, whilst later remodelling of them, and other sites with a different purpose, may have had their architectural emphasis placed more on the display of social power. In much the same way we can observe how the medieval castle progressed from military stronghold to more lightly fortified, and in some cases romantic residences for the social and military elite. In the case of the medieval castle this reflected changing military, political, economic and social circumstances as well as the adoption of gunpowder (see Caple this volume; Parkyn and McNeill this volume), and there is no reason why similar imperatives were not at work at different times throughout the first millennium cal. BC. With so few hillforts having been excavated on any scale in Britain in recent times we are still at an early phase in our understanding of these monuments. Further to this we have some classical accounts from the Late Iron Age which, although mediated through the eyes of classical writers, speak of Britons as no strangers to war and people who took an active part in the slave trade (Cunliffe 2005; James 2007). In the light of the discoveries reported here it is perhaps timely that the topic of 'warfare' be reintegrated, albeit critically, into our future understanding of British hillforts and wider narratives of the period. Having excavated the remains of young women and children from the destruction levels at Fin Cop it is just possible that we can make some sense of the distant echo from the subsequent generation of Britons who, with good reason, chose to remember the site and what took place there by naming it the 'hilltop of the young'.

POSTSCRIPT

by Clive Waddington, Scott Haddow and Karl Harrison

During the summer of 2012 a further trench was opened over the hillfort ramparts (Trench 9 on Illus. 3). The skeletal remains of at least six individuals were recovered from within the wall destruction deposit near the base of the trench comprising two

adults, two neonates and two pre-term foetuses. The first individual, a mature adult, was the only skeleton found in articulation, although it was only partially complete; the cranium, pelvis and femora are missing. Without the pelvis and cranium (the most sexually dimorphic bones), the sex of this individual cannot be accurately determined although the presence of the pre-term foetuses are suggestive of a female. This individual was found at the lowest level of the trench. The second adult individual is represented by a single right clavicle fragment found in the fill above the articulated adult. The incomplete, disarticulated skeletal remains of the perinates and neonates were also found scattered within the fill around the articulated adult, although the remains were concentrated towards the feet area. The skeletal elements of all six individuals are in good to excellent condition. The bones of rodents were found close to the human remains indicating the taphonomic process by which bones may have been moved post-deposition. All the bones were found close to the outer edge of the ditch as in Trenches 1 and 5. The wall destruction deposit had exactly the same characteristics as the wall destruction deposit noted in Trenches 1 and 5. Trench 9 was located 140 m to the south of Trench 1 indicating that the type and sequence of deposits found in Trenches 1 and 5 are not a localized phenomenon on the rampart perimeter. Radiocarbon dating of two of the individuals is underway and all the skeletons from Fin Cop are undergoing DNA and stable isotope analysis.

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