Fin Cop Trench 9 Excavation Report

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Excavating and recording the hillfort ditch in 2012.

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EXECUTIVE SUMMARY

A programme of archaeological investigation took place on the hillfort at Fin Cop during the summers of 2012 and 2014 by Archaeological Research Services Ltd and Cranfield University (2012 only) with the help of local volunteers. The project was funded by Archaeological Research Services Ltd and Cranfield University and further in-kind support was provided by the Peak District National Park Authority and English Heritage.

The excavations reported here followed directly on from the investigations undertaken by Archaeological Research Services Ltd and the Longstone Local History Group during 2009 and 2010. A single trench, Trench 9, was cut over the southeast corner of the main rampart and ditch during the 2012 season and this was extended by 2m in a southerly direction during the 2014 season.

The remains of at least 6 human individuals comprising two adults, one perinate and three neonates were identified in the rampart destruction deposit within the fill of the rock cut ditch. Small fragments of animal bone were found in the hillfort ditch and within the stone wall core comprising cattle, sheep/goat, rabbit/hare and a possible rat.

No radiocarbon dates were obtained as English Heritage have advised that the current dating satisfactorily establishes the sequence of fort ditch deposits and current resourcing priorities does not allow for further dates on this material.

The preservation of archaeological material was remarkable, with all of the skeletons, including those of the babies, being very well preserved considering their age and context of deposition. Snail shells survived well within the hillfort ditch attached to the rocks of the destruction deposit that had previously comprised the hillfort wall and core at depths of 1-2m. Ceramics also survived well in this environment and carbonised residues were found on several sherds. The limestone geology creates a benign environment for the preservation of organic materials, a component of the archaeological record so often missing from the neighbouring gritstone and sandstone areas. Botanical macrofossils and charred wood was also well-preserved. However, due to the free-draining nature of the soils and limestone geology there was no evidence for waterlogged environments, such as in the rock-cut ditch for example, and hence the preservation of organic sediments that could shed light on the surrounding vegetation was absent, which again contrasts with gritstone and sandstone areas where such waterlogged and peaty deposits are more common.

1. BACKGROUND

Excavations took place at Fin Cop over a two week period during June 2012 and a one week period in June 2014 in accordance with the Scheduled Monument Consent Project Design submitted by ARS Ltd to English Heritage (see Appendix 1). The excavations were directed by professional staff from Archaeological Research Services Ltd (2012 and 2014) and Cranfield University (2012) with the assistance of over 30 local volunteers and fourteen post-graduate students.

As the site and its environs have been described fully in previous publications (e.g. Waddington 2012), an in-depth description of the site is unnecessary here, and so only a brief summary follows. The site is located on the crest of a steep sided bluff around the 330m contour with steep scarps dropping off to the north and west over 170m to the floor of the deeply incised valley known as Monsal Dale. The site commands panoramic views in all directions and the other Peak District hillforts at Ball Cross and Burr Tor are visible from the site. This is no doubt salient as it would have allowed for rapid communication between these sites thereby linking the valley-based communities along much of the length of the Derwent and Wye valleys. This question of fort intervisibility, which is really only relevant if it can be demonstrated that they were occupied contemporaneously, is a fascinating research topic in its own right and requires an in-depth study of its own.

The site lies directly on the Carboniferous Limestone bedrock, laid down around 350 million years ago. This has given rise to base-rich fertile soils which have been used for farming from the Neolithic to the present day. 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 supply of fresh running water is the relatively fast-flowing river Wye which snakes along the floor of Monsal Dale to the north and west of the site. However, a spring line appears to occur *c*.150m beyond the hillfort on its eastern approach.

The visible remains comprise a discontinuous 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-facing section of the circuit forming a short area of bivallate defences (Figure 1). Although now turf-covered, the bank is actually a stone wall with material spread beyond its front and rear faces and the ditch is rock-cut. The stone wall has been pushed into the ditch and the remaining wall material appears to have been heavily robbed in the past for stone, both for feeding the limekiln in the southern half of the fort interior, for marling the fields, and for construction of the dry stone field walls during the 'Enclosure' period. Therefore the size of the wall is much reduced from its original form. A cluster of Beaker-period stone cairns are situated around the highest point on the hilltop where their visibility from below would have been maximised, whether stood in Monsal Dale itself, approaching from the east or from other high points in the wider landscape such as Longstone Edge. There may be some additional cairns towards the north-west corner of the bluff still within the area defined by the hillfort circuit.

The previous excavations documented the deliberate destruction of the fort defences at the same time as the bodies of women, babies and children were unceremoniously dumped into the hillfort ditch and covered by the wall destruction deposit. Based on a strictly controlled radiocarbon dating programme of analysis it is clear that this occurred during the Iron Age.

One of the outstanding questions leading on from this initial phase of work was whether the deposition of women and children in the fort ditch was localised to the eastern sector of the defences or whether bodies had been dumped in the ditch around most of its circuit. In addition, it was not known whether the form of the ramparts was consistent around the fort's circuit or

whether it varied in constructional form, and also whether there was any evidence for an earlier phase of defensive works. In order to address these questions a single excavation trench was placed over the ramparts at the southeast angle of the hillfort over 100m away from the nearest previous trench over the ramparts. This trench was also located in a different field from the previous excavations that has a different land-use history and therefore, potentially different condition of preservation.

Figure 1. The earthwork survey of Fin Cop showing the location of the new and earlier excavation trenches.

2. EXCAVATION

The excavation comprised a single excavation trench (Trench 9) and its location, together with those from the 1999 and 2000 excavations, can be seen in Fig. 1. The turf was removed by hand and stacked on plastic and the archaeological layers were excavated by mattocks, trowelling, selected stone removal and small tools as appropriate. Regular photography with back and white print and digital camera was taken during the excavation. Plans and section drawings were made and pro-forma context sheets were used to record each discrete archaeological feature/deposit. Charred wood samples were separately bagged for assessment of their potential for radiocarbon dating and species analysis. Human bones were carefully hand excavated with excavators wearing surgical gloves. The bones were collected in a finds tray and stored in sealable plastic boxes before cleaning and subsequent analysis.

Trench 9

Trench 9 was laid out in a rectangle perpendicular to the rampart and ditch on the southeast corner of the rampart circuit in a broadly east-west direction. An extension to the trench was made in 2014 so that, in total, a 6m width of ditch and rampart was able to be investigated in line with the Scheduled Monument Consent methodology. The combined trench had maximum dimensions of 18m by 7m including the 1m baulk that was left between the 2012 and 2014 trenches (see Fig. 3).

Figure 2. Trench 9 during the 2012 investigation, after turf-removal and initial cleaning, looking west (scales = 2m).

The trench exposed a rock-cut ditch outside the stone defensive wall which had a vertical face on the inner-side of the ditch (Figures 3-5). The ditch was clearly unfinished with the quarrying face

still visible and an area of unexcavated rock still left in place towards the southern side of the trench (Figure 3). The presence of this irregular and jagged slab of rock suggests that separate work gangs were working towards each other as they excavated the ditch. This was a phenomenon noted in both of the previous trenches across the ramparts (Trenches 1 and 5, see

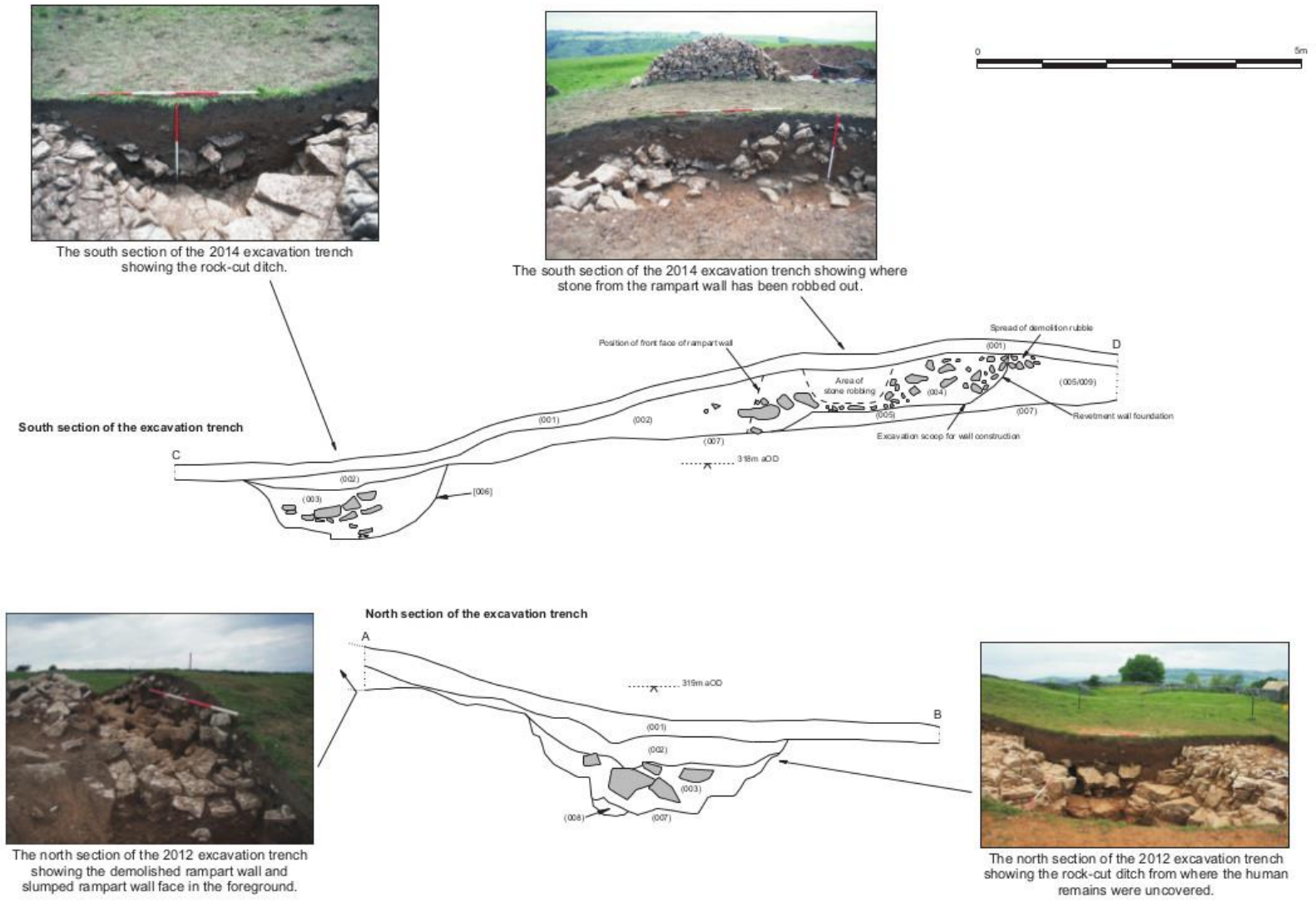
Figure 3. Plan of Trench 9

Looking west across the 2012 excavation trench with the ditch in the foreground and rampart beyond.

View north across the top of the demolished rampart wall.

Looking west across the 2014 excavation trench with the ditch in the foreground and rampart beyond.

Figure 4. Trench 9 Sections.



Waddington 2012). Where excavation of the ditch was complete a flat base was evident. Where complete the base of the ditch measured up to 1.25m deep below the pre-rampart ground surface and was 4 m wide at its top. The ditch contained a thin discontinuous primary clay lens (008) above the natural bedrock (007) in the northern side of the trench which is interpreted as the primary ditch silt against the inner face (see Fig. 4).

Immediately overlying the primary silt and bedrock base of the ditch was the main ditch fill (003) which was identical to the material found in Trenches 1 and 5 (see Waddington 2012). The deposit comprised a rocky fill comprising angular quarried slabs pitched at different angles with increasing voids with depth. The rock is not naturally shaped but rather quarried material with, in some cases, semi-dressed faces. No tip lines or layering was evident indicating the material was deposited as part of a single event. The pitch of the material shows that most of it entered the ditch from its inner and higher side where the stone wall was located. 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. The facing stones and wall core were mingled throughout the fill with no signs of being layered on top of each other if the fort wall had slumped or collapsed. As with Trenches 1 and 2 this fill can be confidently understood as the wall destruction deposit. The voids in the rock have allowed for fine-grained material to percolate through the stone fill so that the rocky fill now appears as rocks set in a soil matrix, however, the soil has entered the fill of the ditch after the rocks were thrown in.

Figure 5. Trench 9 after full excavation of the ditch, looking north-west (Scales = 2m).

Above the wall destruction deposit was a subsoil layer (002) comprising an orange-brown (7.5YR 4/4) ferruginous silt that varied between 0.14m and 0.2m thick above the ditch fill and 0.6m in front of the slumped wall face. Above the subsoil was the modern topsoil and turf layer

(001) which varied between 0.2m and 0.26m thick and was dark grey-brown in colour (7.5YR 3/2).

Within the wall destruction deposit (003) skeletal remains of six individuals were recovered. They included two adults, three neonates and one perinate. The articulated adult (Skeleton 11) was recovered from the lower part of the ditch fill just above the bedrock floor in the north side of the trench approximately 1.5m in from the northern baulk and against the base of the outer edge of the ditch. The individual was not lying flat in the base of the ditch but was at a haphazard angle, partly towards the vertical, indicating that the body had been deposited in the ditch unceremoniously and without any formal attempt at burial. The remains were articulated indicating that the individual had entered the ditch fleshed, however, large parts of the skeleton were missing. This person was found lying on their left-hand side in a sloping position facing south and resting directly against the outer edge of the rock cut ditch. The attraction of scavenging animals to the smell of rotting flesh within the ditch fill and the removal of various parts of the human bodies within the ditch is considered the primary cause of the incompleteness of some of the Fin Cop skeletons and much of the comingled bone. The other adult was identified by the presence of a single clavicle and the rest of this individual may lie under the northern baulk of the ditch. The bones of the neonates and perinates are all fragmentary and were comingled and in close association with the supine adult (Skeleton 11). Given the presence of a perinate it seems likely that Skeleton 11 belongs to a pregnant women otherwise it is hard to account for the presence of the perinate. The nests and burrows of rodents were found throughout the ditch fill and the presence of these animals could also account for the movement, comingling and destruction of small bones, whilst the voids in the rock may have allowed larger bones to fall through once the flesh had decayed, hence why the adult clavicle may have dropped into this part of the ditch from the baulk area. Post-depositional animal action and movement of bone through voids could account for the fragmentary survival and position of the bones without having to invoke special depositional practices. Occasional fragments of animal bone were also found in the ditch fill and these probably represent the remains of food consumption and butchery thrown into the ditch at the same time as the rampart destruction material and human bodies.

Figure 6. Excavation of Skeleton 11within the ditch fill of Trench 9, looking north (scale = 0.25m). Note how the individual was laying partly vertical and against the outer edge of the ditch where it had been covered by rocks thrown in from the dismantled wall. The body had been deposited within the ditch fill as ditch fill material lies below it and was also found above it indicating that the individual entered the ditch as the ditch was being in-filled by the wall destruction debris.

The stone rampart comprised a faced wall constructed primarily from the limestone won from the rock-cut ditch, but occasional blocks of the local chert were also present. The wall had a clear face of semi-dressed large limestone blocks, although most had slumped so that it appeared as an irregular and uneven face. At the rear the soil had been scooped out to create a level platform on which to build the wall and a rough rear revetment wall composed of large blocks had been built against the rear of the scoop (Figure 4). The front and rear facing stones were keyed into the body of the rampart that consisted of a laid rubble core. The wall measured around 4m wide and this is consistent with the wall width recorded in Trenches 1 and 2. Animal bone fragments were recovered from the wall core and from the base of the wall where it had been built into the scoop. The wall in this section of the fort perimeter had been located on a natural convex break in slope and, as is typical on many upland hillforts, the slope break and been scooped back to provide a flat platform on which to construct the rampart whilst also taking advantage of the naturally afforded height gain of the break in slope and the greater ease by which this could be enhanced to build a defensive circuit.

The key structural findings from the excavation of Trench 9 are that the form of the wall and ditch remain consistent with the remains encountered in Trenches 1 and 5 which indicates that the form of the main rampart around the east and southern sides of the enclosure had been constructed to a uniform plan. The wall on the south side of Trench 9 was excavated down to bedrock and it was similarly excavated to bedrock on its northern side. No traces of any earlier rampart or structural features were evident either in plan or section and therefore, in addition to the same findings in Trenches 1 and 5 it is concluded that there was no earlier defensive

perimeter occupying the same line as the stone wall defensive circuit. It remains possible that an earlier defensive timberwork could have been constructed on the site, but if there was one it followed a different alignment to the stone wall which defined the middle Iron Age hillfort defences.

3. **PREHISTORIC POTTERY**

Clive Waddington

A total of eight small pieces and three crumbs of prehistoric pottery were recovered from Trench 9, together weighing 57.44g, and which represent at least seven vessels, although they do not all belong to the same period. The 2012 excavation at Fin Cop extended the range of fabric types present on the site. Further work investigating the residues and dating them could yield some useful results that might also help with tying down the chronological sequence of the site.

Topsoil (001)
A single ceramic sherd [21] was recovered from the topsoil. It is a body sherd with a clear shoulder visible. It has a coarse fabric and is if a different fabric to any of the pther ceramics so far recovered from the various Fin Cop excavations. It contains angular crushed stone inclusions up to 5mm across. It has a rough internal surface and a lightly burnished outer surface and is up to 10mm thick. It has vertical fingernail impressions in a horizontal row running around the pot. The clay used to make the pot has very fine quartz grains within it. Given the fabric, form and decoration of this piece it is thought most likely to be a piece of Neolithic Impressed Ware ceramic or part of an Early Bronze Age Food Vessel.

Ditch fill (003)
Three sherds were recovered from the ditch fill, each being from a different vessel. The best preserved piece is a small body sherd [16] that appears to have adjoined the flat base of a jar-type vessel. It has carbonised residue adhering to its inner surface that is suitable for radiocarbon dating. It has a dark grey fabric and inner surface and a pale brown and burnished outer surface. It contains crushed quartz inclusions up to 3mm across which erupt occasionally on the outer surface. It averages 8mm thick. There is no decoration visible on the sherd. The form and fabric is consistent with a late prehistoric date and it could therefore be from a pot contemporary with the occupation of the fort.

The two other sherd from this deposit are very small body sherd fragments from vessels of unknown size and shape. One sherd [14] is up to 8mm thick and has an oxidised orange outer surface and dark grey core and inner surface. The other sherd [15] is orange throughout and is made from a coarser fabric which contains angular crushed stone inclusions up to 5mm across. This sherd measures 11mm thick. Although both are likely to be late prehistoric little more can be said regarding their stylistic attribution.

Hillfort wall (004)
Two small sherds from different vessels [24 and 25] were recovered from within the stone wall of the hillfort together with three crumbs. One of the crumbs [26] is of the same fabric and probably from the same vessel as sherd [25]. The vessel represented by sherds [25 and 26] has a burnished red-orange oxidised outer surface and a dark grey core and inner surface. Sherd [25] has some carbonised residue surviving on its inner surface that could be suitable for radiocarbon dating. The wall of the pot measure 11mm thick and is made from a relatively smooth fabric. Sherd [24] is from a much thinner-walled pot measuring 6mm thick. This sherd also has an orange oxidised outer surface and grey core and inner surface and is also made from a relatively smooth fabric. The pitted outer surface suggests that burnt organics may have been used as an opening agent for this pot. The sherds are not particularly diagnostic although they fit comfortably into a late prehistoric context.

Pre-hillfort soil (005)

Two small sherds of the same fabric, and probably the same vessel, were recovered from the pre-hillfort land surface. They are grey-brown in colour and of a clearly different fabric to the material found in the stratigraphically later wall and ditch fill. It is a relatively coarse fabric and includes angular crushed stone inclusions up to 4.5mm across which erupt on the outer surface. Slight horizontal grooves on the outer surface of sherd [23] could have resulted from being wiped or roughly burnished with grass. In contrast the inner surface has been burnished smooth implying that liquids may have been held within this vessel. The walls of the pot are quite thin measuring 5-6mm thick. The fabric, despite being coarse, is evenly fired and suggests a well-made pot. It is not diagnostic but its form and fabric would be consistent with an early first millennium cal BC context.

4. LITHICS

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Introduction

A total of 46 lithics were retrieved from the Trench 9 excavation, of which 21 were retrieved from the unstratified topsoil (001) and 13 from the ditch fill (003), four from the surviving area of stone wall that formed the hillfort rampart (004) and eight from the pre-hillfort soil (005). All the pieces, with the exception of those from the stratified deposits, are considered to be residual material resulting from earlier, pre Iron Age, activity on the site. Nonetheless, this lithic material is unlikely to have come from far away, and is possibly just a few metres or tens of metres from their original position of discard. A catalogue of the lithic assemblage is provided in Table 2. All finds were located according to the context in which they were found and each find was bagged and given a unique find number. Measurements are given for complete pieces only in accordance with lithic recording conventions (Saville 1980). Although the assemblage of lithic material is small, those that can be ascribed to a period are mostly typical of the Mesolithic period, although one or two potential later pieces can also be discerned.

Chronology

Most of the assemblage sits comfortably in a Mesolithic manufacturing tradition (*c*.10000-4000 cal BC), as evidenced by the concern for blade production, triangular sectioned blades, and the presence of microblades and microcores. There is one utilised squat flake made on high quality nodular flint that stands out from the rest of the assemblage and this is considered more likely to be of Neolithic or Early Bronze Age date.

Distribution

Although most of the lithics were recovered from the topsoil several had become incorporated into the various ditch fills either by being thrown in with the wall material when it was destroyed or as a consequence of soil creep and then dropping through voids in the rock fills of the ditch.

Raw Material

Thirty one of the 46 pieces (67% of assemblage) recovered from the excavation were flint whilst the other 15 pieces (33% of assemblage) were of local chert, two of which were of high quality dark grey chert, the rest being the very coarse grey chert that occurs naturally on the site. Of those flints that had cortical surfaces surviving on them six had a thick and rough cortex suggesting a glacial provenance for the raw material whilst five had a thinner and smoother cortex suggesting a primary flint, or nodular, origin. Although flint does not occur naturally in the Peak District the nodular flint is likely to have been imported from significantly further afield than the glacial flint that can be found in the sands and gravels and tills of the Trent Valley 35km to the south as well as from similar glacial outwash deposits in the river valleys draining the eastern and western flanks of the Peak District massif which lie slightly closer. Chert can be found on the site and in its immediate vicinity as it occurs naturally in the Carboniferous Limestone upon which the site is located. Any flint found on the site has, therefore, to have been imported and this indicates that material was being brought to the site over a considerable distance during the Mesolithic. Of the flint whose colour could be identified, as some pieces had patina development all over them prohibiting assessment of colour, the main colours were light grey (13) and medium grey (10), with only two pieces of dark grey flint. The chert included seven pieces of light grey material and seven pieces of medium grey material and one piece of dark grey, fine-grained, high quality chert. The variation in colours is likely to reflect a variety of different sources, even though there can be much variation in flint colour within a single nodule. Much of the flint was of high purity with very few pieces being speckled.

Flaking and Manufacture
The assemblage displays evidence for the use of hard and soft hammer working, with most of the edge-trimming and retouch being unifacial. The manufacturing tradition for Mesolithic material relies on a blade-based technology, that includes slender blades where possible, but also thicker stubby blades when the raw material dictates. The blades typically have a triangular section and the production and use of microblades is featured within the assemblage.

Types
A range of tool types is present in the lithic assemblage and these are summarised in Table 1 below. The presence of processing tools, such as the various retouched, edge-trimmed and utilised pieces, together with the serrated blade and the scrapers, indicate a wide range of processing activities, which are usually taken as an indicator of settlement sites (Schofield 1991; 1994). The presence of the scrapers might imply that hide working was an important activity. The two cores also indicate that tool production also took place on site.

Type	**001 Unstratified**	**003 Stone wall ditch fill**	**004 Stone wall**	**005/009 Pre-hillfort soil**	**Total**
Flakes	3	2		2	7
Blades	4	4		2	10
Chip	1				1
Core	1	1			2
Retouched blade		1		1	2
Retouched flake				1	1
Edge-trimmed blade	1			2	3
Edge-trimmed flake	1		1		2
Utilised blade	6	4	3		13
Utilised flake	1				1
Scrapers	2				2
Serrated blade		1			1
Awl	1				1
Total	**21**	**13**	**4**	**8**	**46**

Table 1. Summary of lithic types by context.

Figure 11. Selected flints from Trench 9 from left to right: burnt and utilised blade, edge-trimmed blade, utilised blade, notched blade and broken utilised blade (scale = 5 cm).

Discussion

The lithic assemblage recovered from Trench 9 reveals a similar pattern to the previous lithic material recovered from the Fin Cop excavations (Waddington 2012). Most of the material that can be dated fits comfortably into a Mesolithic manufacturing tradition thereby testifying to an early phase of human activity on this hilltop. The presence of at least one and possibly two, later pieces provides further evidence for the Neolithic and/or Early Bronze Age activity that has been identified through the discovery of other lithic and ceramic finds at the site (Waddington 2012). With the exception of the flint flake from the pre-hillfort soil surface all the other material is likely to be in a residual post-depositional context and therefore not in its original position of discard. This indicates that the construction of the hillfort defences during the Iron Age disturbed pre-existing archaeological remains across the hilltop.

Table 2. Trench 9 Lithics Catalogue

SF No.	Context	Material	Colour	Provenance	Type: General	Type: Specific	Core RS	Period	L (mm)	W	T	Notes
17	5	flint	light grey		flake		sec		13.5	8	2.5	
18	3	chert	medium grey	nodular	blade		sec		21	9.5	6	Probable chert blade
19	4	flint	light grey		edge trimmed flake			ter	9.5	20	3	
20	4	flint			utilised blade			ter				Broken blade patinated a milky white
28	3	chert	light grey	nodular	utilised blade		ter					Broken blade appears to be utilised
29	3	flint	medium grey	glacial	core	multi platform	sec		21	28		Multi platform core lightly patinated
30	3	flint	light grey		blade		sec					Broken blade segment
31	3	flint	light grey		utilised blade		ter					Broken utilised blade with triangular section.
32	3	flint	medium grey		serrated blade		ter	mes	23.5	13	3	An unusually shaped blade that flares at its distal end with fine serration along both long edges on what is a microlith-sized piece. Unusual.
33	3	flint	light grey	glacial	utilised blade		ter		30.5	13	3	Cortical blade with edge trimming
34	3	flint	light grey		flake		sec		23	17.5	3	
35	3	flint	medium grey		blade		sec					Broken bladelet
36	3	flint	medium grey		utilised blade		ter	mes	24	9.5	2.5	
37	3	chert	dark grey	nodular	flake		sec					Broken
38	1	flint	medium grey	nodular	utilised flake		ter	neo?				Broken utilised flake made on nodular flint
39	1	flint	dark grey	nodular	core	multi platform	sec	mes	19	21		Multi platform microblade core
40	1	flint			flake		sec		15.5	14	3	Patinated milky white
41	1	flint	medium grey	nodular	flake		prim		29	18	5.5	Cortical flake unmodified
42	1	flint	medium grey	glacial	utilised blade		ter	mes?				Broken blade with slight traces of utilisation on both long edges
43	1	flint	light grey	glacial	blade		sec					Broken
44	1	flint	medium grey		scraper		ter					Broken and patinated scraper with semi-abrupt retouch

45	1	flint	light grey		utilised blade	microlithic	ter	mes				Broken utilised microlithic blade segment with triangular section and parallel sides
46	1	flint		glacial	flake		prim		17	14	3	Patinated cortical flake
47	1	flint	white		chip		sec					Broken chip
48	1	chert	light grey	nodular	scraper	end	ter	mes	40	21	13	
49	1	chert	light grey	nodular	blade		sec		65	27	14	
50	1	chert	medium grey	nodular	blade		sec					Broken substantial blade segment with triangular section
51	1	chert	medium grey	nodular	edge trimmed blade		ter	mes	34.5	21	8	
52	1	chert	medium grey	nodular	edge trimmed flake	possible scraper	ter		20	24	5	
53	1	chert	light grey	nodular	utilised blade	microlithic	ter	mes				Broken
54	1	chert	medium grey	nodular	blade		ter	mes				Broken blade with hinge fracture on dorsal side and triangular section
55	1	chert	light grey	nodular	utilised blade		ter	mes	94	26	13	Triangular sectioned long blade with utilisation evident on its two long edges
56	1	chert	medium grey	nodular	utilised blade		ter	mes				Broken utilised blade segment with triangular section
57	1	chert	light grey	nodular	utilised blade		ter	mes				Broken utilised blade segment with triangular section
60	4	flint	medium grey		utilised blade		ter	mes	28.5	8	3	
61	9	flint	light grey		blade		ter	mes				broken and possibly utilised bladelet, patinated milky white
62	9	flint	light grey		flake		sec					broken
63	9	flint	light grey	glacial	blade		sec	mes	19	10.5	3.5	
64	9	flint	medium grey	glacial	edge-trimmed blade		ter	mes	33	13	3	
66	9	flint	light brown	nodular	retouched blade		ter	mes	11	13.5	1.5	
67	9	flint	dark grey	nodular	edge-trimmed blade		ter	mes				broken and lightly patinated
68	9	chert	dark grey		retouched flake		ter					broken piece but very good quality fine-grained chert
69	3				retouched blade		ter	mes				heavily burnt and broken piece not able to be certain whether flint or chert
70	4	chert	medium grey		utilised blade		ter	mes	40	19	6.5	
74	3	flint	light grey		blade		sec	mes	14.5	10.5	2	

77	1	flint	light grey	awl	ter	36	32

5. HUMAN REMAINS

Scott D. Haddow

Introduction

The skeletal remains of at least six individuals were recovered from Trench 9. Two adults, one perinate and three neonates are represented. Of the six individuals, five are incomplete (<25%) and one is partially complete (25-75%). The skeletal remains of the four subadult individuals were found completely disarticulated and scattered within the lower fill of the hillfort ditch.

Methods

The methods used in the analysis of these human remains are based on the recommendations of Brickley and McKinley (2004) and Buikstra and Ubelaker (1994). The surface condition of the bones are recorded on a graded scale from 0 to 5+, where "0" indicates excellent bone preservation with no surface erosion or other modifications, and "5+" indicates extremely poor bone preservation with extensive erosion preventing observation of surface morphology (Brickley and McKinley 2004, 16). A skeletal and dental inventory is provided for each individual.

For the subadult skeletal remains, age estimation is based on bone measurements (Sheuer *et al.* 2008). Adult age estimation is based on observation of degenerative changes in the pubic symphysis (Brooks and Suchey 1990) and auricular surface (Lovejoy *et al.* 1985) of the *ossa coxae*. In the absence of the *ossa coxae*, age estimation is based on observation of occlusal dental wear (Brothwell 1981).

Where possible, sex determination of adult skeletal remains is based on sexually dimorphic features of the *ossa coxae* such as the greater sciatic notch, subpubic angle, medial ischio-pubic ridge and presence/absence of the ventral arc. Sexually dimorphic features of the cranium and mandible such as the supraorbital ridge and supraorbital margin of the frontal bone, mastoid process of the temporal bone, occipital nuchal crest and the mental eminence of the mandible may also be used to determine sex. Without the bones of the pelvis, cranium and mandible, accurate determination of sex is difficult. While the size and robusticity of skeletal elements may provide a general indication of sex relative to other individuals, this method is not reliable.

Where observable, a description of skeletal and dental pathological lesions is provided. Adult stature estimates based on maximum lengths of long bones are also provided using the regression formulae developed by Trotter (1970).

Description of the human remains

Skeleton 10

Skeleton 10 is represented solely by a complete (>75%) right clavicle. This was the first human bone found in Trench 9 and it was recovered at a slightly higher level than subsequently recovered skeletal material. The medial and lateral ends of the clavicle are broken. The bone appears to be of adult size, but a more precise age estimate cannot be provided because the fusion state of the medial epiphysis cannot be observed. Determination of sex cannot be undertaken given the incomplete nature of this individual. There are no pathological lesions observable.

Skeletal elements	Preservation

Right clavicle	3

Skeleton 11

Skeleton 11 is a partially complete (25-75%) adult individual found at the base of the rock-cut ditch. The cranium, sacrum, *ossa coxae*, right and left femora and right tibia and fibula are missing post- mortem, but the rest of the skeleton was found in articulation. The lower left leg and left and right feet were found at a slightly higher level than the torso. The body lay on its left side with both arms flexed at the elbow and hands crossed at the wrist beside the mandible. The head was oriented to the northeast and the lower leg and feet to the southwest. Based on the orientation of the mandible, the head would have been situated face down. It is clear that the body was originally deposited with the cranium intact, as several loose maxillary teeth were found in the soil near the mandible. The cranium was likely disturbed at some point after the body had completely skeletonised, as the mandible and all seven cervical vertebrae remained *in situ*. Had the body still been fleshed, it would be very difficult to remove the cranium without disturbing the mandible and taking the atlas and axis (i.e. first and second cervical vertebrae).

Age and sex

All observable epiphyses are fused and, in the absence of the pubic symphysis and auricular surfaces of the *ossa coxae*, age estimation based on occlusal dental wear places this individual between 25 and 35 years of age. Determination of sex for this individual is difficult without the *ossa coxae* and cranium. The individual appears possibly female based on the morphology of the mandible, including mental eminence, body depth and gonial angle. However, measurement of the maximum diameter of the right humeral head (48.88mm) places it well within the male range. Measurement of the maximum diameter of the head of the radius (22.71mm) provides an indeterminate sex assessment. As such, with the conflicting evidence at hand and without the more reliable bones of the pelvis and cranium to aid the determination of sex, it is not possible to confidently assign this individual to either sex category.

Pathology

Pathological lesions observable on the bones of this individual include remodelled periosteal bone on the dorsal surfaces of the right 4^{th} and 5^{th} metatarsals with concomitant enlargement of the shafts. This appears to be the result of an infection or fracture that has subsequently healed. A small (<5mm) lytic lesion, possibly osteochondritis dissecans, is observable on the proximal articular surface of the left navicular, as well as on the plantar articular surface of the right talus. A partially healed stress fracture is observable on the *pars interarticularis* (neural arch) of the 5^{th} lumbar vertebrae. The right side remains ununited, while the left side is partially united and well remodelled. In addition, the body of the 5^{th} lumbar is compressed laterally on the right side. Slight osteophytic lipping is observable on the anterior disk margins of the upper thoracic vertebrae, while Schmorl's nodes are observable on the disk surfaces of the lower thoracic vertebrae as well as the lumbar vertebrae. Degenerative joint disease (DJD) in the form of lipping and porosity of the joint margins is observable on the scaphoid and lunate of the left carpals, as well as the head of the right humerus and distal radius and ulna. Interproximal carious lesions are observable at the cemento-enamel junction of the mandibular left second and third molars. The mandibular left lateral and central incisors and first molar, as well as the mandibular right canine and central and lateral incisors were lost antemortem and the alveoli are partially resorbed. Calculus is present on the lingual surfaces of the mandibular right premolars and first molars, as well as on the buccal and lingual surfaces of the mandibular right second molar. Calculus is also present on the buccal surfaces of the maxillary left premolars and first molar, as well as on the maxillary right second molar.

Stature

Based on the maximum length of the right humerus (29.9cm), a stature estimate of 162.54cm for white males and 158.43cm for white females is provided.

Skeletal elements	Preservation
Mandible	2
7 x cervical vertebrae	3
12 x thoracic vertebrae	3
5 x lumbar vertebrae	3
Complete right clavicle	2
Partial left clavicle	3
Partial left scapula	3
Partial sternal body	3
Fragmented left 1st rib	3
Fragmented left 2nd rib	3
Fragmented right 2nd rib	3
>20 x fragment left ribs (3-12)	3
>20 x fragment right ribs (3-12)	3
2 x fragment left humerus	3
Complete right humerus	3
Partial left radius	3
Partial left ulna	3
2 x fragment right radius	3
Partial right ulna	3
Left scaphoid	3
Left lunate	3
Left trapezium	3
Left trapezoid	3
Left capitate	3
Left 2nd metacarpal	3
Left 4th metacarpal	3
Left 5th metacarpal	3
Right navicular	3
Right lunate	3
Right triquetral	3
Right pisiform	3
Right trapezoid	3
Right capitate	3
Right hamate	3
Right 1st metacarpal	3
Right 2nd metacarpal	3
Right 3rd metacarpal	3
Right 4th metacarpal	3
Right 5th metacarpal	3
Right 1st proximal phalanx	3
5 x unsided proximal phalanges (II-V)	3
5 x unsided intermediate phalanges (II-V)	3
3 x unsided distal phalanges (II-V)	3
Complete left patella	3
2 x fragment left tibia	3
2 x fragment left fibula shaft	3
Left incomplete calcaneus	4
Left talus	3

Left cuboid	3
Left navicular	3
Left 2nd cuneiform	3
Left 3rd cuneiform	3
Left 1st metatarsal	3
Left 2nd metatarsal	3
Left 3rd metatarsal	3
Left 4th metatarsal	3
Left 5th metatarsal	3
Left 1st proximal phalanx	3
Right partial calcaneus	4
Right talus	3
Right cuboid	3
Right navicular	3
Right 1st cuneiform	3
Right 1st metatarsal	3
Right 2nd metatarsal	3
Right 3rd metatarsal	3
Right 4th metatarsal	3
Right 5th metatarsal	3
Right 1st proximal phalanx	3
2 x unsided proximal phalanges (II-V)	3
2 x unsided intermediate phalanges (II-V)	3

Dental inventory

Right

Left

	M3	M2	M1	P2	P1	C	I2	I1	I1	I2	C	P1	P2	M1	M2	M3
Maxilla	2	2					2	2				2	2	2		
Mandible	2	2	2	2	2	4	4	4	4	4	2	2	2	4	2	2

Key: 1=Present, but not in occlusion; 2=Present, development complete, in occlusion; 3=Missing, with no associated alveolar bone; 4= Missing, with alveolus resorbing/fully resorbed: antemortem loss; 5=Missing, with no alveolar resorption: post-mortem loss; 6=Missing, congenital absence; 7=Present, damage renders measurement impossible but observations are recorded; 8=Present, but unobservable (e.g. deciduous or permanent tooth in crypt); Blank=tooth and alveolus not present.

Skeleton 12

Skeleton 12 consists of the incomplete skeletal remains of a pre-term infant. Based on measurements of the *pars petrosa* of the temporal bone, the age of this individual is estimated to be between 26-28 weeks *in utero*. There are no pathological lesions observable.

Skeletal elements	**Preservation**
Left *pars petrosa* (temporal bone)	3
Right *pars petrosa* (temporal bone)	3
Left proximal ulna	3
Unsided radius shaft	3
Unsided fibula(?) shaft	3
Unidentified long bone shaft	3

Skeleton 13

Skeleton 13 consists of the incomplete skeletal remains of a perinate/neonate. Based on the length (12.56mm) of the left *pars basilaris* of the occipital bone and the left clavicle (42.5mm), this individual is estimated to be between the ages of 38-40 weeks *in utero*. There are no pathological lesions observable.

Skeletal elements	Preservation
Left mandible	3
Sphenoid body	3
Left *pars lateralis* (occipital bone)	3
Pars basilaris (occipital bone)	3
Left *pars petrosa* (temporal bone)	3
>10 unidentified cranial fragments	3
Right first rib	3
>10 unsided rib fragments	3
Left clavicle	3
2 x cervical neural arches	3
Incomplete right humerus shaft	3
Left distal humerus	3
3 x unsided metacarpals	3
Right femur	3
Left femur	3
Left proximal tibia	3
1 x unsided metatarsal	3

Skeleton 14

Skeleton 14 consists of the incomplete skeletal remains of a perinate/neonate. Based on the length of the par petrosa (16.06mm) of the temporal bone, this individual is estimated to be between 40 and 42 weeks of age *in utero*. There are no pathological lesions observable.

Skeletal elements	Preservation
Left mandible	3
2 x fragment of left humerus	3
2 x fragment of left radius	3
Left proximal ulna	3
2 x fragment of right humerus	3
Right ulna	3
Right distal radius	3
2 x fragment of left femur	3
3 x fragment of right femur	3
Left proximal tibia	3
Left and right *pars petrosae* of temporal bone	3
Pars basilaris of occipital bone	3
Right *pars lateralis* of occipital bone	3
Distal fibula shaft (unsided)	3
Left scapula	3
Right frontal bone	3

Dentition	Notes
Crown incompletely formed	Crown incompletely formed

Skeleton 15

Skeleton 15 is represented by a left proximal femur and right distal humerus. The bones are duplicated in Skeletons 13 and 14 and thus cannot belong to these individuals; they are also too large to belong to Skeleton 12. Estimation of the age of this individual based on long bone lengths cannot be carried out because the bones are incomplete, but they are similar in size and development to Skeletons 13 and 14, thus placing it in the neonate age category. No pathological lesions are observable.

Skeletal elements	Preservation
Left proximal femur	3
Right distal humerus	3

Discussion

Given the disarticulated and incomplete nature of the subadult skeletal remains, it seems likely that they have been disturbed and moved post-mortem (for example by scavengers and/or rodent action), or perhaps left exposed for some time before being buried completely within the hillfort ditch. Those bones that were recovered are in relatively good condition and it is unlikely that the missing elements have degraded as a result of the burial environment. In addition, the recovery strategy employed during excavation was very thorough – the chances of bones being missed are low. As such, the incomplete nature of these subadult remains is probably due to scavenging activities by animals. An alternative, though unlikely, explanation is that these subadult remains represent a form of secondary burial in which the bones were only deposited in the enclosure ditch after the bodies had completely decomposed elsewhere, but this is highly unlikely given that some of the subadult bones were found immediately next to the adult (Skeleton 11) at the base of the ditch and the foetus (Skeleton 12) is likely to have been within/associated with Skeleton 11. Skeletal remains of individuals in secondary burials are rarely complete. There is no skeletal evidence for perimortem trauma on any of the skeletal material from Trench 9, including the adults.

As with the subadults, the incomplete nature of the remains suggests that the bones have been disturbed, and some removed, post-mortem. The burrows and nests of rodents within the ditch fill indicates one likely source of this disturbance and the actions of scavanging animals shortly after burial could account for the removal of various parts of the skeletons. It is possible, though unlikely, that the adults were also left exposed for some time before being covered over. The orientation of Skeleton 11 indicates that the body was deposited unceremoniously.

6. ANIMAL BONE

Milena Grzybowska

Introduction and MethodsMaterial

The material consisted of over 198 grams of animal bone and teeth derived from multiple Iron Age contexts (Table 1). The analysis follows English Heritage MAP2 (1991) and Animal bones and Archaeology: Guidelines for best practice, Consultation draft developed by English Heritage (Baker and Worley 2013). The bones were identified to species or a taxonomic group when possible. Taphonomic traces were recorded. The state of preservation was scored using a four stage system (excellent, good, fair and poor). Age was established on the basis of wear of mandibular dentition (Grant 1982). Sex assessment was attempted based on the presence of morphological traits. The bones were measured following Von den Driesch (1976). A zone recording system was applied (Dobney and Rielly 1988). Identification of butchery marks was attempted and a minimum numbers of individuals (MNI) were estimated. Tabulation of the results is provided in Table 4.

Results

A total assemblage of 155 fragments of animal bone was analysed. The animal bones were in a poor state of preservation with occasional complete destruction of the cortex (Table 1). The majority of the assemblage was of fairly uniform cream coloration with the exception of a single unstratified leporid tibia, that was brown in colour. The fragmentation of the material was high, with the majority of the bones not exceeding 30mm in size. Majority of the bones were severely weathered and affected by root etching. The poor surface preservation of the majority of the bones precluded detailed analysis of butchery marks and pathological conditions. No examples were identified. Sex estimation was not possible for this assemblage.

Taxonomic distribution

The assemblage comprised domesticated and wild species. The taxa identified included cattle (Bos taurus), sheep/goat (Ovis aries/Capra hircus), rabbit/hare (Oryctolagus/Lepus sp.) and possible equid/horse (Equus sp.) (Table 3). Among the small mammal remains a possible rat (Rattus sp.) was identified (Table 3).

Ageing

Observation of the mandibular dental wear resulted in identifying three subadults among cattle and one among sheep/goat remains (Table 1).

Context (Finds number)/Year	Cattle	Sheep/goat	Equid?	Rabbit/Hare	Small fauna
3(2)/12	1	-	1	-	-
3/12	-	-	-	-	1
3(4)/12	1 subadult	1 subadult	-	-	1 (rat?)
3(75)/14	1 subadult	-	-	-	-
4(71)/14	1	-	-	-	-
8/12	1 subadult	-	-	-	-
unstratified	-	-	-	1	-
MNI	**3**	**1**	**1**	**1**	**2**

Table 3. Minimum number of individuals (MNI) of pooled assemblage.

Metric analysis

Fragmentation and erosion of the bone surface did not allow for detailed metrical analysis. One specimen, however, proved informative. Measurements were taken for the 1st phalanx of a cow (Glpe:57.07mm (64.4)/ Bp:27.15mm (40.2)/ Bd:27.30mm (35.6)). When accounting for the observed minimal erosion, these measurements appeared to be considerably smaller than the average dimensions for the corresponding phalanges of modern bulls and oxens (given above in brackets; Bartosiewicz 1993). This is consistent with the smaller size of Iron Age bovids in comparison to post-Norman conquest individuals (Albarella *et al*. 2008).

Conclusion

The assemblage comprised domesticated and wild taxa. All identified specimens of the former group represented the remains of cattle with the exception of one poorly preserved specimen of sheep/goat and a possible fragment from an equid. Remains of a possible rat were also recognised. The leporid specimen is most likely of intrusive nature, suggested by its differential preservation. Poor representation of small bovids, in particular sheep, is probably due to a small sample size and the poor state of preservation that precluded identification of the large proportion of fragments. The young age of cattle individuals are consistent with the kill-off pattern observed among contemporaneous British assemblages (Albarella *et al*. 2008). Frequent subadult cattle remains may indicate an economy based on meat production, however, the small size of this assemblage is not sufficient to yet make such a case, and the contribution of cereals and other crops in the economy also remains unknown.

Table 4. Animal bone tabulated

context	taxon	element	side	zone >50%	zone <50%	measurements	wgt. (g)	frag. count	age	taphonomy	butchery	pathology	preservation	colour
3/75/14	cattle	M1/M2 lower	R	crown and root	-	Crown height >36.61mm	17.9	1	pre-h ; accessory column not in wear, roots 3/4 developed, wear stage impossible to establish due to pos-depositional breakages; MWS:8-40 (Grant 1982)	D, R, very abraded	-	root extension medially from mesial root associated with a circular lesion at the base of the root	poor	cream
3/75/14	mammal	unid	-	-	-	m:45	7.5	20	-	D, very abraded	unob	-	poor	cream
4/76/14	unid	long bone	-	-	-	m:63	2.4	1	-	RE	unob	-	poor	cream
3/73/14	unid	unid	-	-	-	m:20	0.7	2	-	very abraded	unob	unob	poor	cream
4/71/14	mammal	long bone	-	-	-	m:38	2.7	1	-	rounded	unob	unob	poor	cream
4/71/14	cattle	1st phalanx anterior	-	1,2,3	-	Glpe:57.07/ Bp:27.15/Bd:27.30	11.5	1	fused	R, RE, very abraded	-	none	poor	cream
Unstrat/ 12	rabbit/hare	tibia	R	5,6,9,10	8	m:76/ max width dist:14.14	4.2	1	fused	D, post-dep	-	-	poor	brown
8/12	cattle	mandible (&10)	R	-	1	m:35	5.2	3	-	D	-	-	poor	lbrown
8/12	cattle	dp4 lower (&9)	R	crown and root	-	m:33	6.5	1	wear stage e/f; MWS:4 (Grant 1982)	D	-	-	poor	cream
8/12	cattle	dp3 lower	R	crown and root	-	m:25	1.2	2	worn	D	-	-	poor	cream
8/12	mammal	long bone unid	-	-	shaft	m:33	0.7	1	-	D, abraded	-	-	poor	brown
8/12	mammal	unid	-	-	-	m:25	5.7	30	-	D	-	-	poor	lbrown
3/sk10/12	human*	unid	-	-	-	m:23	2.1	30	-	D	-	-	poor	lbrown
3/2/12	large ruminant	metacarpus	-	-	5,6,7,8	m:95	27.9	2	-	D, extremely abraded and rounded	unob	unob	poor	cream
3/2/12	large mammal/equid*	mandibular permanent cheecktooth*	-	-	crown and root	m:36	10.8	1	heavily worn	D, RE	unob	unob	poor	cream
3/2/12	mammal	unid	-	-	-	m:26	3.8	6	-	D, RE, very abraded	unob	unob	poor	cream
3/4/12	cattle	dp4 lower	L	crown	root	m:28	2.7	1	wear stage k; MWS:13-26 (Grant 1982)	D, very abraded	-	-	poor	cream
3/4/12	sheep/goat	P4* upper	-	crown	-	m:18	0.9	1	crown not fully formed, no wear	D	-	-	fair	cream
3/4/12	mammal	unid	-	-	-	m:52	6.3	9	-	D, RE, very rounded, abraded	unob	unob	poor	cream
3/4/12	mammal	cancellous bone unid	-	-	-	m:36	6.4	1	-	D, very abraded, nearly no cortex	unob	unob	poor	cream
3/4/12	mammal	unid	-	-	-	m:42	2.5	1	-	D, R	unob	unob	poor	lbrown
3/12	mammal	unid	-	-	-	m:10	1	4	-	D, very abraded	unob	unob	poor	cream
3/12	small mammal/ rat*	ulna	R	a,b,c,d,e	-	m:11	0.1	1	not fused with radius	D	-	-	fair	cream
9/65/14	mammal	unid	-	-	-	m:55	12.4	1	-	R, very abraded	-	-	poor	cream

9/65/14	mammal	unid	-	-	-	m:30	1.3	1	-	very abraded	-	-	poor	cream
bulk/3/12	mammal	unid	-	-	-	m:32	10	15	-	severly weathered	unob	-	poor	cream
bulk/3/12	large mammal	axis	-	-	4	m:65	7	1	-	severly weathered	unob	-	poor	cream
bulk/3/12	mammal	scapula	-	-	5	m:52	4.3	1	-	severly weathered	unob	-	poor	cream
8/12	cattle	ilium	L	1	5	m:90	17.2	1	subadult -overall size, fusion unob, articular surface smooth	D	-	-	poor	cream
8/12	mammal	unid	-	-	-	m:66	9	10	-	R, D, very abraded	unob	unob	poor	cream
3/12	mammal	unid	-	-	-	m:30	5	20	-	D, very abraded	unob	unob	poor	cream
3/12	mammal	unid	-	-	-	m15	0.1	5	-	D, very abraded	unob	unob	poor	cream
3/4/12	small mammal	humerus	L	5,6,7,8	-	m:11	0.1	1	-	D	-	-	fair	cream

* - possible; unob – unobservable; unid – unidentified

7. BOTANICAL MACROFOSSILS AND CHARRED WOOD

Laura Strafford

Introduction

One environmental bulk sample was submitted for assessment together with 14 wood charcoal dating samples. All samples came from a variety of features and deposits from Trench 9 and are detailed in Tables 3 and 4 below.

Environmental Sample Number	Context Number	Context Description	Volume of Sediment	Site Notes
1	008	Primary ditch silt	3 litres	Charcoal present

Table 3. Details of the environmental sample taken from the site

Dating Sample nos.	Feature no.	Context Description
14	002	Upper ditch fill (subsoil)
1, 2, 3, 6, 7, 8, 9, 10, 11, 12	003	Ditch fill
13	004	Rampart deposit – stone wall
4, 5	008	Primary ditch silt

Table 4. Details of the dating samples taken from the site.

Methodology

Environmental sample

The single environmental bulk sample was processed off-site for the recovery of charred plant remains (CPR) using bucket flotation. The flot was collected on a 300µm mesh and the heavy residue was sieved to 1mm, and both were air-dried at room temperature after which the residue was sorted by eye for artefacts and ecofactual remains. The flot was scanned for charred plant remains using a binocular microscope at between x12 and x40 magnification.

Wood charcoal dating samples

For the charcoal assessment, all charcoal fragments deemed large enough for identification purposes from each sample were fractured to expose a fresh transverse section (TS) and sorted into groups based on anatomical features under a binocular microscope at magnifications of up to x40. These were fractured to expose tangential (TLS) and radial longitudinal (RS) sections and mounted on to a slide using blu-tack. These were then examined using a binocular microscope at up to x200 magnification. Identification was made according to anatomical characteristics described by Schweingruber (1990). Charcoal identifications were made with reference to on-line and published reference collections/sources.

Results

Environmental sample (Table 5)

The residue from the flot sample yielded only sparse organic material being dominated by sand. Few charcoal fragments were present, but in all cases these were very fine, measuring less than 1mm in length, hence they were unidentifiable. No other CPR was present in the flot and no

artefacts were retrieved from the sample. The sample was found to be unsuitable for both species determination and dating.

Wood charcoal samples (Table 6)
As with the environmental sample, the charcoal samples were generally small with few samples being large enough for formal identification. Those samples that could be identified are listed below:

(002) – sample 14
Many fragments were too small for identification but four larger fragments were identified as oak (*Quercus* sp.).

(003) – samples 1, 3, 8 and 9
All of the fragments large enough for identification purposes examined were ring-porous, indicative of either ash (*Fraxinus* sp.) or oak (*Quercus* sp.).

(003) – sample 11
The transversal section of the largest piece is indicative of gymnosperm (soft wood such as pine, yew or juniper) but the small size of sample makes it impossible to be certain.

(004) – sample 13
The transversal sections of three individual fragments are all very ring-porous, and are therefore highly likely to be either oak (*Quercus* sp.) or ash (*Fraxinus* sp.).

The lack of identifiable round wood in any of the samples means that the suitability of any of these charcoal fragments for radiocarbon determination is poor as they may give any resulting date an 'old wood' effect.

Conclusion
Most of the charcoal fragments which were large enough to identify were ring-porous with wide rays, which is indicative of oak (*Quercus* sp.), however the small sample sizes meant that a large enough area could not be examined for a definite identification and it should be considered that ash (*Fraxinus* sp.) may also be a possibility. Although the majority of fragments were unidentifiable, it was possible to determine that the samples were overwhelmingly dominated by dicotyledon wood (hard wood), with the exception of sample 11 (003) which contained at least one fragment of gymnosperm wood (soft wood/conifer). Analyses of charcoal from the previous excavations at Fin Cop showed that oak and yew charcoal were present in the Iron Age deposits and therefore the likelihood is that it is oak and a little yew charcoal that is present in the material recovered from Trench 9.

It is not recommended that any of the material from the environmental sample or wood charcoal samples be used for dating purposes.

Sample Number	Context Number	Feature	Date	Flot vol.	Assessed vol.	Charcoal	Grain	Seeds	Weed seeds	Chaff	Other	Notes

1	008	Primary ditch fill	Iron Age ?	<1ml	100 %	++						100% of flot scanned. Majority of flot comprises sand. Very poor CPR. Some charcoal present but mostly very small fragments <1mm. No other CPR observed. This sample is unsuitable for both C14 and identification purposes

Table 5. Results of the environmental sample assessment.

Sample no.	Feature no.	Condition	Description	Species	Suitable for Dating?
1	003	Good	>30 examples of wood charcoal, many of good size (~10mm). All fragments examined are ring-porous, indicative of either ash or oak. The RLS and TLS sections are made hard to examine by the fragmentary nature of the sample and so a definite ID cannot be determined.	cf. oak (*Quercus* sp.), possible ash (*Fraxinus* sp.)	N - no round wood
2	003	Good	Dark sediment that may once have contained charcoal but no longer survives. No charcoal present.	n/a	N
3	003	Fair	~10 wood charcoal fragments, all <5mm. One fragment identified as oak (*Quercus* sp.), the others are too small for species determination.	Oak (*Quercus* sp.)	N - no round wood
4	008	Poor	~20 wood charcoal fragments, mostly <2m but few larger examples (~7-10mm). Indeterminate due to sediment particle within the wood structure	Indeterminate due to size and dirt adhered/ within sample.	N - no round wood
5	008	Poor	Very small and fragmented charcoal, not possible to ID due to size. All fragments <4mm and most <1mm.	Indeterminate due to size	N - no round wood
6	003	Fair	~10 wood charcoal fragments, all <3mm. Indeterminate due to small size	Indeterminate due to size	N - no round wood
7	003	Fair	1x wood charcoal fragment, <4mm. In determinate due to small size	Indeterminate due to size	N - no round wood

8	003	Fair	3 small wood charcoal fragments, only one of which is >4mm. TS displays large pores but difficult to ascertain arrangement or structure. As only one pore is visible this is suggestive it may be a ring-porous wood rather than a semi- or diffuse-porous wood, which would indicate oak (*Quercus* sp.) or ash (*Fraxinus* sp.). However, this is merely speculative	Indeterminate due to size - possibly oak (*Quercus* sp.) or ash (*Fraxinus* sp.)	N - no round wood
9	003	Fair	~10 wood charcoal fragments, mostly <5mm but one larger example ~10mm. Ring-porous with wide rays, indicative of oak *(Quercus* sp.)	Oak (*Quercus* sp.)	N - no round wood
10	003	Poor	~5 wood charcoal fragments, all less than 4mm. And therefore indeterminate	Indeterminate due to size	N - no round wood
11	003	Fair	1x wood charcoal fragments ~5mm and some smaller <1mm fragments. Large fragment TS indicative of gymnosperm but small size of sample makes it impossible to determine further	Gymnosperm but further ID not possible due to size	N - no round wood
12	003	Poor	~20 small fragments of wood charcoal, all <4mm and therefore indeterminate	Indeterminate due to size	N - no round wood
13	004	Poor	Some fair-sized fragments (10-12mm) however very brittle and difficult to break without fracturing to get a clear section. Only TS section fractures neatly, very ring-porous, therefore highly likely to be either oak (*Quercus* sp.) or ash (*Fraxinus* sp.)	cf. oak (*Quercus* sp.) or ash (*Fraxinus* sp.)	N - no round wood
14	002	Fair	Approx. 10 small fragments between 4-10mm.Many fragments too small for ID but 4 larger fragments observed all oak (*Quercus* sp.)	Oak (*Quercus* sp.)	N - no round wood

Table 6. Results of the wood charcoal sample assessment.

8. DISCUSSION

The presence of numerous Mesolithic chipped stone pieces throughout the excavation deposits testifies to the importance of this hilltop during the Mesolithic. Two observations can be made with respect to this assemblage to add to those made in the previous publication (Waddington 2012). Firstly, most of the material recovered during the 2012/14 excavations was flint rather than chert indicating that flint material was being imported to the area during the period of the Mesolithic represented by this material. Secondly, although some of the assemblage was from residual contexts, much of it was from the pre-hillfort soil layer indicating they were near to their original position of discard, perhaps having only moved a relatively short distance downslope due to post-depositional soil creep. This suggests that in situ Mesolithic deposits could survive on the site, particularly in those areas where there are thicker soils overlying the bedrock. The discovery flint in this locale, in contrast to the large quantities of chipped chert found higher up the slope and further north on the site during the previous investigations, might also imply that there are different phases of Mesolithic activity represented on the hilltop. Although currently only represented by the lithics and the evidence for chert quarrying (see Waddington 2012), the importance of Fin Cop as a Mesolithic site should not be under-estimated because despite the subsequent disturbance caused by Neolithic, Bronze Age, Iron Age, medieval and post-medieval activity across the site, there is still relatively undisturbed Mesolithic material to be found where the pre hillfort soil layers survive at depth.

The Iron Age hillfort defences in the southern half of the site have now been shown to be of broadly the same constructional form as in the northern half of the site. In short the defences comprised a stone-faced front wall with rougher rear stone revetment with a laid stone fill. In the case of Trench 9 it appeared that some soil had also been dumped with the wall core, something not witnessed previously, but this could be to do with the fact that in this part of the perimeter the platform on which the wall had been built had been clearly shaped artificially by scooping into the slope in order to create a flat base on which to build the wall. This created and upcast of pre-hillfort soil that needed to be disposed of and it is thought that the soil seen within the wall core in the rampart section originated from the scooped upcast. The wall averaged around 4m wide, just as it had done in trenches 1 and 5 and, although most of the facing stones in this section had slumped, they could still be seen to have been roughly faced and dressed and typically comprised most of the larger blocks encountered.

As with the previous trenches cut across the ramparts, Trench 9 provided evidence for an unfinished ditch which appears to have been constructed by work gangs working towards each other. As with the previous trenches 1 and 5, Trench 9 showed the ditch edges, in places, to be jagged, stepped, blocks had been left unlifted, the ditch was of varying depth and an irregular ‘causeway’ had been left in place. A quarry line could even be seen when viewed from above showing how far the work gang had got. Within the wall destruction deposit within the ditch the remains of six individuals were recovered, although all were fragmentary. Some remains may have been brought into that part of the ditch by rodents (e.g. the single clavicle testifying to the presence of the adult Skeleton 10) whilst scavengers may have also disturbed and removed body parts from other individuals during the rotting process (e.g. from Skeleton 11). All of the human remains were found towards the outer edge of the ditch, consistent

with all the skeletal remains found previously, suggesting they had entered the fort ditch by being disposed of from its outer edge. The position of the articulated adult (Skeleton 11) indicated that it had been dumped unceremoniously into the ditch at the same time as the wall destruction material which is again consistent with the previously excavated skeletons from the northern half of the fort's perimeter.

The presence of six individuals from the 6m of ditch excavated in Trench 9 further supports the estimate of roughly one individual per metre of ditch (Waddington 2012, 224). Given that three trenches have now been cut across the rampart with the furthest two paced 180m apart, it can be concluded that people were disposed of in the ditch around most, if not all of the fort's rock-cut ditch. Given that the fort's ditch extends for approximately 400m a reasonable estimate for the number of individuals within the ditch would be around 400.

9. ACKNOWLEDGEMENTS

The excavations at Fin Cop would not have been possible without the assistance of the stalwart volunteers who assisted most ably through a wide range of weather conditions in both 2012 and 2014 and we extend a sincere thankyou to them all. We would like to record our thanks to the landowner Neil Brocklehurst who kindly gave access to the site and permission to undertake the excavations. The support of Jon Humble and Tim Allen of English Heritage is gratefully acknowledged together with the assistance of Sarah Whiteley and Pete Bush of the Peak District National Park Authority and also to Natural England for permission to work on land in a Higher Level Stewardship Scheme. The work was jointly funded by Archaeological Research Services Ltd and Cranfield University. The specialist analyses, including radiocarbon dating and advice from Peter Marshall of English Heritage, the assessment of botanical macrofossils by Laura Strafford, the animal bone by Milena Grzybowska and human bones by Scott Haddow have contributed significantly to this study and their contribution is warmly acknowledged.

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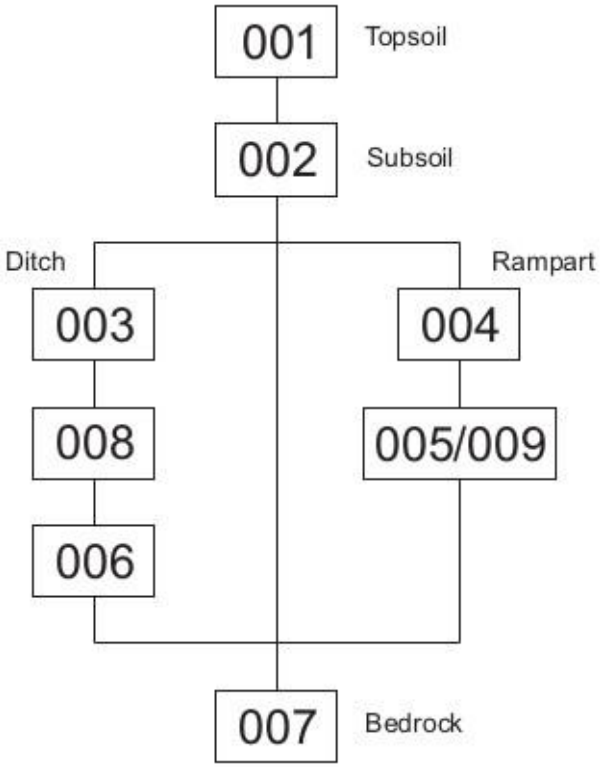
Appendix 1 Matrix and Context Register



Context / feature No.	Context Description	Max Dimensions (mm.)	Depth (m)	Colour of fill (Wet Munsell number)	Texture of fill	Small Finds
001	Topsoil	Across trench	0.2 – 0.26 m	Dark grey/brown [7.5 YR 3/2]	Medium clay silt	Occasional chipped stone tool
002	Upper ditch fill/subsoil	Across Trench	0.14 – 0.28 m	Mid orange-brown [7.5 YR 4/4]	Fine clay silt	
003	Rampart destruction deposit filling ditch containing many limestone blocks, some roughly dressed, together with human remains and animal remains. Many pitched at an angle where they had evidently been thrown in and many voids still evident. Evidence for burrowing rodents throughout fill.	Across trench	0.70 m	Orange/brown (10 YR 4/3)	Fine silt clay matrix around the rock fill	Contained human skeletal remains of individuals 10-15
004	Stone rampart wall, the upper portion being collapsed and spread with the lower course still in-tact. A slumped face was evident at the front and a rough rear revetment wall was also apparent with a laid stone core and evidence for later stone robbing from above. Comprised mostly limestone and occasional chert country rock.	Across trench	0.45 m	Pale grey limestone	Course	Occasional flint tool and fragment of animal bone
005	Pre-hill fort soil comprising a loamy ferruginous medium fine soil.	Across trench	av. 0.21 m	Orange brown [10 YR 4/4]	Medium fine	Chipped flints
006	Cut of ditch	The ditch was quite narrow in this part of the defensive circuit measuring ?? m wide	1.25 m			
007	Limestone bedrock, natural upper surface is weathered due to dissolution by water.	NA	-	Pale grey	-	
008	Primary ditch silt	Across trench in base of ditch	0.04 m	Strong brown (7.5 YR 4/6)	Fine	
009	Pre-hillfort sub soil (same as 005)					

Appendix 2 Scheduled Monument Consent Project Design

Fin Cop Hillfort, Monsal Head, Derbyshire

Project Design for Scheduled Monument Consent

Human remains uncovered within the hillfort ditch during 2010 excavations.

April 2012

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Fin Cop Hillfort, Monsal Head, Derbyshire

Project Design for Scheduled Monument Consent

Contents

Executive Summary

Fin Cop hillfort is located on the crest of a steep valley side in an area of Carboniferous Limestone, with spectacular views overlooking Monsal Dale and the River Wye. A programme of archaeological investigation took place on the hillfort at Fin Cop during the summers of 2009 and 2010 by Longstone Local History Group under the direction and supervision of Archaeological Research Services Ltd with Scheduled Monument Consent. These investigations did not complete the originally intended coverage because the hillfort remains were more robust and better-preserved than surface inspection suggested. With the discovery of human skeletal remains of nine individuals, this slowed down excavation but provided evidence for a hitherto unknown destruction event. As funding was limited this phase of investigation was then drawn to completion. This event is represented in the archaeological record by a homogenous ditch fill comprising the remnants of the hillfort wall and containing the remains of, predominantly women and children.

The present project is a partnership between Archaeological Research Services Ltd and Cranfield University with the following aims:

- *To complete the originally intended evaluation of the fort to adequately assess the survival and condition of preservation in an area of the fort not previously assessed.*
- *Apply forensic archaeological analysis to the surviving remains on the site to provide additional information concerning the survival of remains, taphonomy and condition of preservation thereby adding value to what is already known.*
- *Investigate a sufficient length of rampart to inform whether there was an earlier phase of enclosure and to test the current understanding of the structural form of the known defences.*

The project will comprise a targeted evaluation focusing on the hillfort ditch within the southern field which has a different history of land use to the northern field. No previous excavation has taken place in the southern field. The trench will be targeted adjacent to an area damaged by a concrete dew pond and will measure approximately 19m by 6m, which represents 0.9% of the monument's area in the southern field. It is intended to excavate this trench over two seasons in 2012 and 2013 with the project archive completed within 12 months of the final fieldwork. Landowner consent has been given for this. Post-evaluation assessment and analysis will be undertaken by Cranfield University and Archaeological Research Services Ltd, and compiled within a synthetic report. Cranfield University have offered their full range of specialist services to the project. The work will be published in an appropriate national journal.

1. Background to the Project

1.1 Description, ownership and management of site

Fin Cop hillfort is located on the crest of a steep valley side in an area of Carboniferous Limestone at grid reference SK 174 711, with spectacular views overlooking Monsal Dale and the river Wye. The fort, enclosing an area of approximately 5 ha, is defended by a counterscarp bank, ditch and wall (now denuded) and is bivallate for a small portion of its circuit. The interior contains a ruinous barrow and an area of limestone quarrying dating to the post-medieval period. In 1998, Wilson and English excavated part of a low bank and ditch located approximately 150 metres south of the outer rampart of the hillfort, concluding it was either related to the defensive bank of the hillfort, or formed a corral for livestock (Wilson and English 1998, 91-92). However, whether this feature is contemporary with the hillfort is still not known, though in form it appears to be later in date than the prehistoric remains associated with the fort itself.

The southern field, which is the focus of this investigation, is owned by Mr. Neil Brocklehurst (Highfields Farm Ashford Bakewell DE45 1QN).

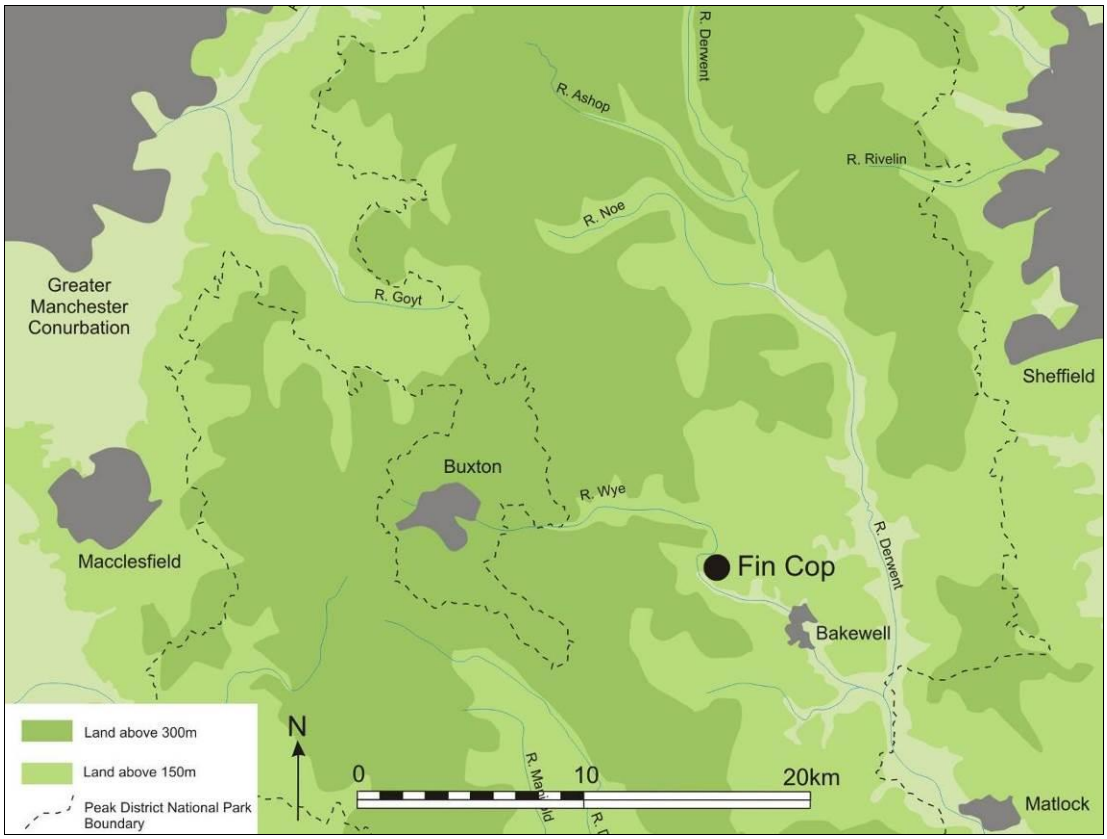

Fig. 1 Location of the site.

1.2 Historical and Archaeological Background

Fin Cop became a scheduled monument on the 2nd November 1950. It is a steep-sided promontory situated above a bend in the river Wye on the limestone plateau of Derbyshire. The monument occupies the north-west corner of the promontory, overlooking Monsal Dale to the north and Wye Dale to the west. It includes an Iron Age promontory fort and, within the area covered by the fort, an Early Bronze Age bowl barrow and an eighteenth century limekiln with an attached limestone quarry.

A programme of archaeological investigation took place on the hillfort at Fin Cop during the summers of 2009 and 2010 by Longstone Local History Group under the direction and supervision of Archaeological Research Services Ltd. The project was funded by the Heritage Lottery Fund and further in-kind support was provided by the Peak District National Park Authority and English Heritage. The evaluations followed directly on from a desk-based assessment (Brightman 2009), earthwork survey (Burn and Brightman 2009) and geophysical survey (Smalley 2009). In combination, the excavations included the excavation of 50 test pits and nine evaluation trenches.

Three trenches were cut over the inner hillfort rampart and all revealed the reduced remains of a very substantial dry stone wall, with a carefully built outer and inner face, a compact stone core and a considerable spread of wall material extending out to the rear. The wall had clearly stood to a considerable height in its original form, probably 3- 4m from its foundation course. The stone face appears to continue around the rampart perimeter as further evidence for a stone face was revealed in a small trench excavated over an area of active erosion. Outside the wall was a rock-cut ditch that had a vertical inner face and sloping outer face and which, in places, exceeded over 2m in depth from the ground surface. The ditch appeared to have unfinished sections implying that the defensive circuit had never been entirely finished. Two of the trenches revealed a ditch terminal and a short section of unexcavated rock before the ditch resumed on either side. Apart from small spreads of primary ditch silts the ditch in all trenches was predominantly filled by material from the deliberately pushed-in stone wall. This comprised a single blocky fill with many voids visible. Within this wall destruction deposit the skeletal remains of a minimum of nine individuals were found. They included two adult women, a male teenager, a toddler and four babies, all of whom appeared to have been thrown into the ditch haphazardly as the wall material was pushed in. This has been provisionally interpreted as representing the sacking of the fort and the execution of women and children and their disposal in the ditch as part of the destruction of the ramparts (Waddington 2011).

Investigations within the interior of the hillfort produced evidence for several rock-cut features including pits and post-sockets, together with over 200 sherds of late prehistoric pottery. Radiocarbon dating of residues on two separate ceramic sherds returned statistically consistent Late Bronze Age dates indicating occupation on the site prior to the construction of the hillfort. Test pits were excavated in two east-west transects across the hillfort. They produced 590 chipped stone artefacts of which all but 17 were made from the locally outcropping chert. This prodigious assemblage is all consistent with a Mesolithic date, given the concern for blade production and the occasional diagnostic core and tool, including scrapers and a microlith. The majority of the assemblage is from the primary stage in the core reduction sequence indicating

that this is a raw material extraction site where preliminary flaking took place (Waddington 2011).

Trenches focusing on the western scarp edge, a precipitous slope that forms the perimeter of the fort on this side, revealed the crest of the slope to have been quarried back to form a flat platform and to win material for the construction of a small stone wall, remains of which were visible running on top of the scarp edge. The quarrying can be traced on the surface running along much of the western perimeter, although it peters out towards the north, again suggesting that the defences here were never completed (Waddington 2011).

A comprehensive programme of radiocarbon dating has shown that the hillfort was constructed *440–390 cal BC (68% probability)* (this is a Bayesian statistical estimate) and that the destruction event occurred shortly afterwards, and certainly within less than two hundred years (Waddington 2011).

The preservation of archaeological material across the site was remarkable, with all of the skeletons, including those of the babies, being very well-preserved considering their age and context of deposition. Snail shells survived well attached to the rocks comprising the hillfort wall, core and destruction deposit, sealed within these deposits at depths of 1-2m. Ceramics also survived well in this environment and carbonised residues were found on several sherds. The 2009-2010 evaluations illustrated that the limestone geology creates a benign environment for the preservation of organic materials, a component of the archaeological record so often missing from the neighbouring gritstone and sandstone areas. Botanical macrofossils and charred wood was also preserved (Waddington 2011). The pre-hillfort land surface survives, at least in places, on the site. This soil is still not yet fully understood and would benefit from further evaluation.

The only other known archaeological intervention on the site is the investigation of a known Early Bronze Age barrow by Hayman Rooke in the late 18th century. The barrow contained three inhumations and at least four cremation burials along with lithic and ceramic finds indicating an Early Bronze Age date (Rooke 1796).

1.3 Circumstance of the Project

The limited evaluation will be undertaken as a partnership project jointly between Archaeological Research Services Ltd and Cranfield University, to complete the evaluation work by sampling in the southern field. This field has experienced a different history of land-use to the northern field, where the upstanding remains of the hillfort are better preserved. In the southern field medieval ridge and furrow agriculture appears to have graded the ramparts and the proximity of the limestone quarry and kilns has probably also influenced the reduction of the ramparts in this field. At the north-east corner of this field a concrete dew pond for stock watering has been inserted into the hillfort ditch. It is intended to locate the evaluation trench on this stretch of the rampart to evaluate the preservation of remains close to this area of impact.

The proposed evaluation trench will extend over 114 square metres (19m x 6m) out of the total of 12,691 square metres of the monument in the southern field. This represents 0.9% of the monument's extent in the southern field. Previously 403 square metres of the site has been evaluated, and combined with the new area this would total 517 square metres of evaluation. This equates to 1.2% of the entire monument, which measures 42,762 square metres.

2. Aims and Objectives

2.1 Aims

The project aims to carry out a programme of limited evaluation focused on the previously uninvestigated southern portion of the hillfort. Results of this work will also contribute to future management of the site and contribute to a better understanding of the site. The overarching aims of the project are:

- To complete the originally intended evaluation of the fort to adequately assess the survival and condition of preservation in an area of the fort not previously assessed.
- Apply forensic archaeological analysis to the surviving remains on the site to provide additional information concerning the survival of remains, taphonomy and condition of preservation thereby adding value to what is already known.
- Investigate a sufficient length of rampart to inform whether there was an earlier phase of enclosure and to test the current understanding of the structural form of the known defences.

2.2 Objectives

In order to deliver the aims described above, the following objectives will be employed:

- Undertake limited evaluation focusing on the hillfort rampart within the southern field.
- Recovery of artefacts, ecofacts and palaeoenvironmental remains.
- Scientific assessment and analysis of remains to be undertaken during the post-excavation phase by Cranfield University.

ARS Ltd will ensure that all post-excavation work is completed to professional IfA standards, and all specialist work is completed on any discoveries and the results formally published. Cranfield University have offered their full range of specialist services at no cost to the project. The evaluation will be completed as specified and site archived within 12 months of the completion of fieldwork.

2.3 Relevant Research Agenda

2.3.1 The Derbyshire Archaeological Advisory Committee

This group has produced a document on the research potential of the County. It highlights the following questions that need to be addressed in order to further understanding of Iron Age sites in the Peak District:

- When did hillfort construction begin?
- Were the late prehistoric hillforts enclosed or defended from the outset
- Were there other forms of settlement around them as yet undiscovered?

2.3.2 The Hillfort Study Group

The Hillfort Study Group produced a document describing in brief the various hillfort sites in the Peak District and previous work undertaken on them. This survey identifies the chronic lack of understanding of these monuments particularly in terms of date, function and the activities that took place at these sites. It also draws attention to the need for pro-active conservation and management of the sites, something that can only be achieved through a more informed understanding of the monuments, their form, history and condition of buried archaeological deposits.

2.3.3 The East Midlands Archaeological Resource Assessment and Research Agenda

This English Heritage funded document includes a section on the Iron Age (Willis 2006, 118) which stresses the need for an improved understanding of the Peak District sites.

"Their (Peak District hillforts) locations are striking and dramatic. Several are completely undated; elsewhere the limited excavation undertaken has yielded no unequivocal indicators as to date and sequence…Overall, the general pattern for the Southern Pennines is one of limited dating evidence and limited resolution for these sites".

Within the newly-published East Midlands Research Agenda and Strategy (Knight *et al* 2011) the following is outlined as a key Research Objective:

- 4D – Assess the regional resource of hillforts and analogous sites

2.3.4 SHAPE 2008 – A Strategic Framework for Historic Environment Activities and Programmes in English Heritage.

This document outlines the research framework and objectives prioritised by English Heritage as being of key significance to the management of the historic environment. The main objectives relevant to this project are:

- 11111.710 – Understanding past populations of Britain: Historical demography and human biology.
- 11112.510 – New Frontiers: Clarifying poorly understood chronologies.

3. Method Statement

Where necessary, before and during the project, consultation will be held with all project partners, including English Heritage, the Peak District National Park Authority, Natural England and also the landowner, who has already given his formal agreement to the investigation.

Copies of all reports produced as part of the project will provided to EH, PDNPA and the Derbyshire HER.

3.1 Proposed Evaluation Trench

One evaluation trench will be excavated focusing on the ditch within the southern portion of the hillfort. The dimensions of the trench will be in the order of 19m x 6m, and it will be located within the area defined on Fig. 2 below.

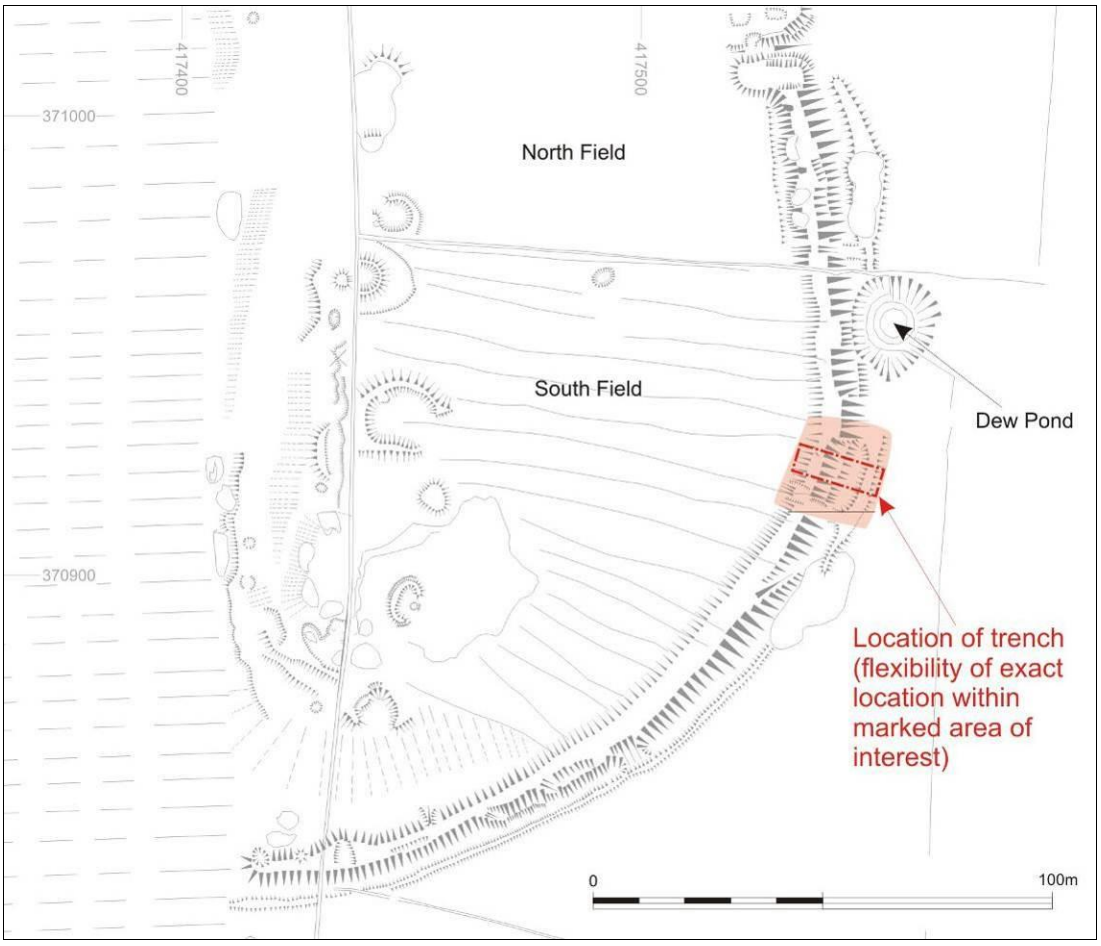

Fig. 2 Area within southern field in which evaluation will be undertaken.

3.2 Evaluation

All turf will be removed by hand and turfs carefully stacked on plastic sheets with turf laid on to turf and soil laid on to soil to prevent degradation of the turf. This methodology follows that previously agreed with the PDNPA and through advice from Natural England and has worked well during the previous phase of work.

Excavation of archaeological features will be undertaken as far as is required to characterise them, identify sequence and where possible to establish their date. All archaeological features and deposits will be excavated by hand using trowels and small tools.

All artefacts will be treated in accordance with UKIC guidelines, *'First Aid for Finds'* (1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis.

Given the previous investigation yielding the remains of nine individuals, it is considered possible that human remains will be encountered and excavated as part of this project. Human remains will be initially cleaned and recorded *in situ*, where possible, and removal will comply with Ministry of Justice regulations. Archaeological Research Services Ltd will comply with all reasonable requests of interested parties as to the method of removal, re-interment or disposal of the remains or associated items. Every effort will be made, at all times, not to cause offence to any interested parties.

Appropriate procedures under the relevant legislation will be followed in the event of the discovery of artefacts covered by the provisions of the Treasure Act 1996.

During and after the excavation, all recovered artefacts and environmental samples will be stored in the appropriate materials and storage conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, regular monitoring of conditions, immediate selection for conservation of vulnerable material).

3.3 On-site Recording

An existing site grid is already tied into the National Grid and all work will be undertaken relative to this existing grid.

A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pro-forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings will be drawn at 1:50, 1:20 and

1:10 scales as appropriate. All archaeological deposits and features will be recorded with an above ordnance datum (aOD) level. Where stratified deposits are encountered, a 'Harris' matrix will be compiled.

A photographic record of all contexts will be taken in digital format and black and white print and will include a clearly visible, graduated metric scale. A register of all photographs will be kept.

3.4 Environmental Sampling

Significant archaeological contexts or those with significant organic content will be sampled. Small features or lenses with organic content will be 100% sampled while bulk samples of 10 litres will be taken from larger feature contexts. Initially only 5 litres from every context will be assessed so that those deposits that are worth further analysis can be identified and those that are not discarded.

The field method will include putting 100% of all samples through a 10mm mesh and then collecting the residue. Of the remaining material 5 litres (or all of the material if it is less) will then be flotated and the flots and residues collected. These will be collected in graduated sieves with the smallest being 500μ.

Given the geology of the site, it is considered to be extremely unlikely that waterlogged deposits be encountered, but in that instance, ARS Ltd will undertake further consultation with an appropriate specialist to determine a strategy.

3.5 Reinstatement

All turfs will be re-laid by hand when trenches are backfilled. All trenches will be fenced off to allow the grass to recover and prevent stock damage or accidents, including the pooling of lead-rich water that could otherwise pose a hazard to stock. The fencing will be undertaken by the PDNPA.

3.6 Post-Excavation

Post excavation work will comprise the following:

- Checking of drawn and written records during and on completion of fieldwork.
- Production of a stratigraphic matrix of the archaeological deposits and features present on the site, if appropriate.
- Cataloguing of photographic archive.
- Cleaning, marking, bagging and labelling of finds according to the individual deposits from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to an appropriate Conservation Laboratory. Finds will be identified and dated by appropriate specialists and all

metal finds will to be x-rayed prior to assessment. Assessment reports will be prepared where necessary.

A report detailing the finds of the evaluation will be prepared on the completion of site works and will consist of:

- A title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address.
- Full contents listing.
- A non-technical summary of the findings of the excavation.
- A description of the archaeological background with reference to previous fieldwork.
- A description of the topography and geology of the area.
- A description of the methodologies used during the works.
- An interpretive account of the results of the works.
- Plans, section and plates as required, to illustrate the main text.
- A discussion of the results considering the site in its regional perspective.
- Specialist reports on the artefactual/ecofactual remains from the site.

3.7 Finds processing and storage

All finds processing, conservation work and storage of finds will be carried out in compliance with the IFA guidelines for Finds Work (2001) and those set out by UKIC (1990). All small finds will be recorded as individual items and appropriately packaged. Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. Assessment and analysis of artefacts and environmental samples will be carried out by an approved specialist.

3.8 Site Archive

The archive will be compiled in an orderly fashion to industry standards and format and in accordance with the Guidelines for the Preparation of Excavation Archives for Long Term Storage (UKIC 1990). This includes the indexing, ordering, quantification and checking for consistency of all original records. A stratigraphy report and site matrix will accompany the primary record together with copies of all specialist reports, summary documents and photographic archive.

The archive and finds will be deposited with Buxton Museum once all post-excavation work is completed and the final report produced. The archive from this phase of investigation will be incorporated into that of the previous investigations by ARS Ltd to ensure there is a single comprehensive source for future research.

4. Resources and Programming

4.1 Staffing and Equipment

See appendix 1 for a list of project personnel.

It is anticipated that there will be up to 10 students and volunteers working under supervision of at least two ARS Ltd staff and two members of Cranfield University staff on any one day. Given that volunteer numbers will undoubtedly vary on the day, a ratio of 1 professional staff to a maximum of eight volunteers will be provided.

As well as the personnel noted, the project team for the investigation will include specialists selected to cover all the relevant areas of expertise and knowledge which are likely to be required during and after the work. These experts are identified in Appendix 1.

The archaeological field team will consist of field archaeologists of recognised competence, all of whom have previously undertaken work on this site. ARS Ltd is a Registered Organisation with the Institute for Archaeologists and all work is undertaken to the requisite IfA standards.

4.2 Timetable

The excavation work will take place from Wednesday 6th June 2012 – Friday 15th June inclusive. A second season of evaluation will take place at a similar time in 2013.

The excavation report, archive and publication article will be completed and circulated within one year of the completion of fieldwork, subject to specialist assessment and analysis. The archive and finds will be deposited with Buxton Museum following completion of all post-excavation works.

4.3 Health and Safety

All relevant health and safety legislation, regulations and codes of practice will be respected. ARS Ltd will carry out a health and safety risk assessment in advance of the work, and all work on site will be monitored by elected health and safety officers.

Previous evaluation work has shown the ditch sections to be stable, however, should instability be observed then shoring of the trench section will be undertaken. The ramparts, being made of tightly laid stone, are very stable, and given that they appear

to only survive to a reduced height in the southern field they are highly unlikely to exceed 1.5m in depth and the risk of section collapse is considered to be very low. Sections will only be left open as long as required for adequate recording before being carefully backfilled.

ARS Ltd regularly undertake fieldwork and are experienced at managing risks and ensuring site safety for all staff.

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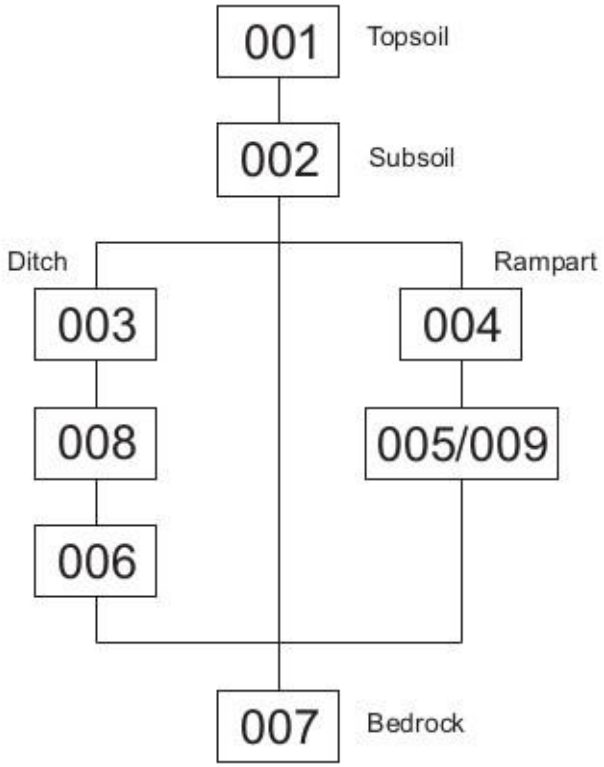
Appendix 1 – Project Personnel

Project Stakeholders		
East Midlands Inspector of Ancient Monuments	Jon Humble	English Heritage
Project Co-Director	Dr. Clive Waddington	Archaeological Research Services Ltd
Project Co-Director	Dr. Karl Harrison	Cranfield University
Project Co-Director and Materials Specialist	Dr. Andrew Shortland	Cranfield University
Project Officer and Osteoarchaeological Specialist	Kate Mapplethorpe	Archaeological Research Services Ltd
Botanical Macro-Fossils	Paul Flintoft	Archaeological Research Services Ltd
Ceramic Analysis	Clive Waddington Pauline Beswick	Archaeological Research Services Ltd Independent
Lithic Analysis	Clive Waddington	Archaeological Research Services Ltd
Scientific Dating	Peter Marshall	English Heritage
DNA Specialist	Deborah Harrison	Cranfield University

Appendix 1 Matrix and Context Register



Context / feature No.	Context Description	Max Dimensions (mm.)	Depth (m)	Colour of fill (Wet Munsell number)	Texture of fill	Small Finds
001	Topsoil	Across trench	0.2 – 0.26 m	Dark grey/brown [7.5 YR 3/2]	Medium clay silt	Occasional chipped stone tool
002	Upper ditch fill/subsoil	Across Trench	0.14 – 0.28 m	Mid orange-brown [7.5 YR 4/4]	Fine clay silt	
003	Rampart destruction deposit filling ditch containing many limestone blocks, some roughly dressed, together with human remains and animal remains. Many pitched at an angle where they had evidently been thrown in and many voids still evident. Evidence for burrowing rodents throughout fill.	Across trench	0.70 m	Orange/brown (10 YR 4/3)	Fine silt clay matrix around the rock fill	Contained human skeletal remains of individuals 10-15
004	Stone rampart wall, the upper portion being collapsed and spread with the lower course still in-tact. A slumped face was evident at the front and a rough rear revetment wall was also apparent with a laid stone core and evidence for later stone robbing from above. Comprised mostly limestone and occasional chert country rock.	Across trench	0.45 m	Pale grey limestone	Course	Occasional flint tool and fragment of animal bone
005	Pre-hill fort soil comprising a loamy ferruginous medium fine soil.	Across trench	av. 0.21 m	Orange brown [10 YR 4/4]	Medium fine	Chipped flints
006	Cut of ditch	The ditch was quite narrow in this part of the defensive circuit measuring 4.0 m wide	1.25 m			
007	Limestone bedrock, natural upper surface is weathered due to dissolution by water.	NA	-	Pale grey	-	
008	Primary ditch silt	Across trench in base of ditch	0.04 m	Strong brown (7.5 YR 4/6)	Fine	
009	Pre-hillfort sub soil (same as 005)					