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**The Excavation of an Early Medieval Field System at Hillesley
Farm, Hillesley, Gloucestershire, 1997**

by T. Longman
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The Excavation of an Early Medieval Field System at Hillesley Farm, Hillesley, Gloucestershire, 1997

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With contributions by Rod Burchill, Julie Jones, Jodie Lewis and David Mullin

Introduction

Hillesley Farm stands on the north-west side of the village of Hillesley, c.2.5 km south of Wotton-under-Edge (Fig. 1). The earliest archaeological finds in its vicinity are five Neolithic or Bronze-Age flint flakes discovered some 120 metres to the south (Gloucestershire Sites and Monuments Record [GSMR] 2421). There are no other recorded prehistoric sites close to the village, the nearest being a Bronze-Age round barrow at Holwell Wood near Hawkesbury and another two Bronze-Age round barrows near Wotton-under-Edge. Similarly, there is a lack of Romano-British material from the area around Hillesley, the nearest known Romano-British site being the 3rd/4th-century villa at Wortley between Alderley and Wotton-under-Edge. A team, led by David Wilson of Keele University, excavated that site in the 1980s and found evidence that it had been plundered by the Saxons (Wilson forthcoming).

In the summer of 1977 the Committee for Rescue Archaeology in Avon, Gloucestershire and Somerset (CRAAGS) carried out a watching brief during the laying of a sewage pipe around three sides of a field called 'Very Croft' (formerly 'Berry Croft') in the centre of Hillesley village (Fig. 1). An area on the west side of the field was stripped of topsoil revealing areas of occupation and numerous sherds of medieval pottery. Subsequently Peter Ellis of CRAAGS surveyed a complex of earthworks in the field and interpreted it as a Norman ring-work (Ellis 1984). In June 1979 the earthworks were levelled to create a playing field for the village. During this work a watching brief, by Bruce Williams of the Field Archaeology Unit of Bristol City Museum, identified four phases of activity on the Very Croft site with the second, third and fourth phases representing the construction of a small ring-work in the 11th/mid 12th century and subsequent strengthening in the mid 12th century and the late 12th/early 13th century (Williams 1987). Other archaeological sites in Hillesley dating from the medieval period, when the village was part of Hawkesbury parish, include that of the chapel of St. Giles, which stood next to the ring-work on the site of the present mid 19th-century church (Rudder 1779; GSMR 5533), and strip lynchets c.0.5 km south of the village (GSMR 2077).

In early 1997 Bristol and Region Archaeological Services (BaRAS) carried out an archaeological evaluation on land to the rear of Hillesley Farm. The site, at O.S. Nat. Grid ST 768897, is on gently sloping ground at a height of c.101 m above O.D. and was bounded by the farm buildings on the east, Kingswood Road and cottage gardens on the south, houses on the west, and a walled garden and farmland on the north (Fig. 1). The underlying geology varies between beds of Cotteswold sands and Inferior Oolitic Limestone of the Jurassic period. During the evaluation five trial trenches were excavated (Finn 1997). In Trench 1, in the south-west corner of the study area, a ditch aligned SW–NE was identified containing sherds of Saxo-Norman pottery dating

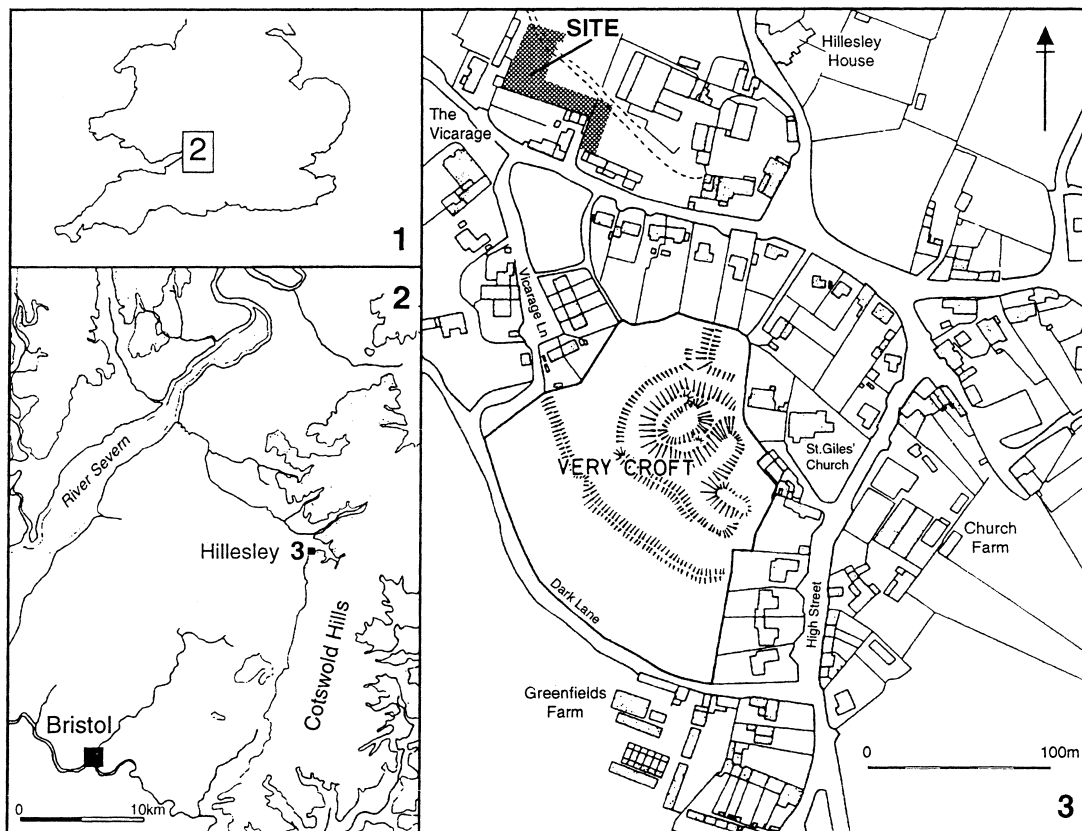


Fig. 1. Site location plan.

from the late 11th/mid 12th century. Although contemporary with the first and second phases of the development of the Norman ring-work castle in Very Croft, the ditch was too narrow and shallow to be defensive and it could represent property or field boundaries laid out in the late 11th/early 12th century.

The find led to an excavation of the site between 29 September and 7 November 1997, before the construction of 11 four-bedroom houses there. The excavation is the subject of this report. The archive and finds from the excavation have been deposited with Stroud Museum (accession number STGCM 1997.3).

Historical Background

Hillesley, which was located in the Gloucestershire hundred of Grumbald's Ash, is first mentioned in the 'South Stoke' charter of A.D. 972 when it was one of the constituent parts of a great estate centred on Hawkesbury (Finberg 1961, 59). At least part of the territory of Hillesley could have been inhabited by the 8th century. The settlement, when the place name was formed, was in a woodland environment, in a clearing, hence '-ley' derived from 'leah' (Gelling 1984). The area of the Cotswolds in which the village of Hillesley is located was and still is quite heavily wooded.

The name also includes a personal element, 'Hild' (Smith 1963), suggesting a lord/owner/dominant peasant, presumably a layman.

The charter of 972 granted the Hawkesbury estate to Pershore Abbey in Worcestershire. At some point Hillesley was completely detached from it and passed into the hands of a minor lay lord. In 1066 this was Aelfric, who may have been the same Aelfric who had other Gloucestershire properties, including Rendcomb, Tetbury Upton and Culkerton. In 1086 it was held by Bernard under Thurstan son of Rolf (Moore 1982). At that time there were 12 tenants and 8 slaves on Bernard's estate. The slaves could have been living in the manor house complex or they might have been given their own cottages. The established peasant community consisted of 5 'half villeins', an unusual term in Domesday Book that must mean that they held half yardlands (virgates) of perhaps 20 acres each, and 7 bordars, who are likely to have had about 5 acres each. One can thus estimate that there were only about 150 acres in the hands of tenants, which is confirmed by their small number of ploughs – only 2. The 2 demesne ploughs suggest perhaps only 200 acres of demesne, making approximately 350 acres under the plough altogether. When the nucleated village developed is not known, but one guesses that it was there by the 12th century, perhaps even by the time of Domesday Book (for discussions of medieval settlement and agriculture, see Aston *et al.* 1989; Dyer 2002; Lewis *et al.* 1997).

The manor remained in lay lordship and a ring-work was built. The ring-work may have been constructed at a time of military emergency, such as the period in the late 11th century when Bishop Geoffrey of Coutances and Robert de Mowbray plundered Bristol and William de Eu laid waste the area around Berkeley, only 13 km north-west of Hillesley (Williams 1987). However, the usual explanation for a ring-work is that it was part of the process whereby a minor knightly family established its standing in competition with its rivals, protecting its household from a range of threats and dominating the local peasantry. If it was built at a time of emergency, in the long run it also served these other functions.

The *Gesta Stephani* mentions that many castles were constructed or rebuilt in the mid 12th century when King Stephen (1135–54) and Matilda, daughter of Henry I, were contesting the Crown. It is possible that the strengthening of the ring-work, the second phase of its development, dates from that time (Potter 1976; Williams 1987). The manor of Hillesley had passed to Henry Newmarch by 1166 and it is possible that he was responsible for the last stage of the fortification's development. This may well have taken place in 1193–4 when John, count of Mortain, was fomenting rebellion against his brother King Richard (1189–99). According to the Pipe Roll of that year more than 30 castles were put into a state of defence, their walls being repaired and their garrisons strengthened (Poole 1951).

The cartulary of Pershore Abbey records that Henry de Livet, whose family were lords of the manor from the mid 13th century, acquired permission for a private chaplain for his family in Hillesley (Williams 1987). Henry's manor house (curia) and its chapel may have been in the ring-work, but the archaeology recorded in 1979 in Very Croft, where the latest pottery found dated from the 13th century, supports the hypothesis that the ring-work was abandoned in that period. Although the medieval chapel of St. Giles stood immediately to the east, the administrative and residential functions of the castle may have been transferred before 1285 to a manor house elsewhere, possibly on the site of Hillesley Farm. Part of the present farmhouse is thought to date from at least *c.*1450.

The population of the village had grown by 1327 when there were 8 householders wealthy enough to pay tax in Hillesley (Franklin 1993, 112). That figure suggests a total of perhaps 20 households, allowing for those exempted from taxation.

THE EXCAVATION

The purpose of the excavation was to record the nature and extent of the surviving archaeology at Hillesley Farm, to seek an interpretation of any occupation on the site, particularly from the 11th and 12th centuries, and to assess its relationship, if any, to the ring-work castle to the south.

Methodology

Topsoil and modern made ground were removed by mechanical excavation to a depth of 0.46 m revealing a yellowish-brown plough soil and several linear features. The area cleared, measuring approximately 1,658 m², was hand-cleaned and recorded and a manual excavation of archaeological features followed. A number of 2 m² sondages were also excavated through the 0.25 m-thick plough soil (Figs. 7 and 9). A number of samples were taken from both the buried soil and the fill of the cut features. The remainder of the buried soil was then removed mechanically under archaeological supervision and the excavated area once again hand-cleaned and recorded. Any further archaeological features were manually excavated.

Period 1

Archaeological evidence for the occupation of the site before the late 11th century came in the form of 14 earth-filled pits and postholes (Figs. 2 and 13) cutting the yellowish-orange sandy clay

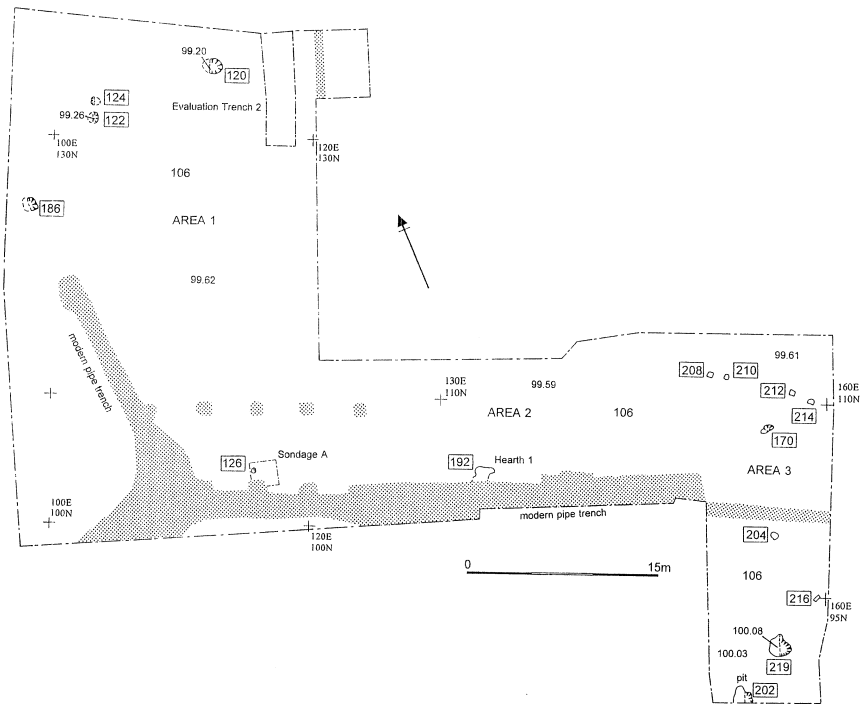


Fig. 2. Period 1 features.

subsoil, context 106. In addition, there was a small burnt feature, which has been tentatively interpreted as a hearth [hearth 1]. None of these features, however, provided any pottery or other datable finds. The blade of a whittle tang knife was recovered from the greyish-brown soil (171) that filled pit 170.

Period 2

Phase 1 (Fig. 3)

The yellowish-brown plough soil (105), which covered most of the excavated area and sealed the Period 1 features, contained pottery from the 11th century to the late 12th or early 13th century.

Soil 105 was tilled as part of an early medieval field system that covered much of the site. The archaeology shows that at least in this small area the land was ploughed in strips. Ditches 2–6, which are likely to have been strip boundaries, provided evidence for the orientation of several of them. Whereas Ditch 1 (Fig. 8) seems to have been intended as a visible boundary, Ditches 2–6 were more ephemeral. They seem to have been created as a by-product of the agricultural use of the land, perhaps of a ploughing system.

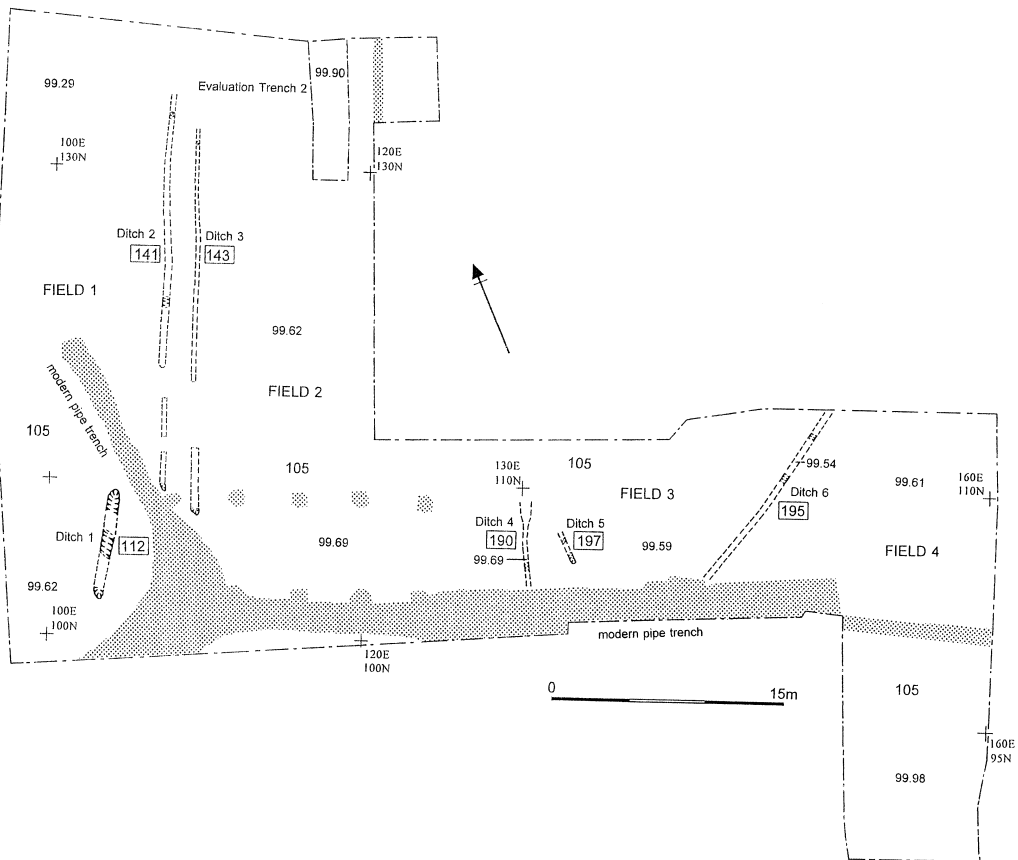


Fig. 3. Period 2 (Phase 1) features.

Ditches 2 and 3 were dug alongside a path or track extending from the late 11th-century settlement out onto the farmland. Ditch 2 measured 24 metres long by 0.63 metres wide and Ditch 3 some 24 metres long by 0.65 metres wide; it is possible that both originally continued further north for a furlong (*c.*200 m), but no further traces survived.

Both ditches (Fig. 6B) cut soil 105 and contained a similar greyish brown soil. The fill (142) of Ditch 2 contained mid 12th-century pottery whereas a number of 11th/early 12th-century pottery sherds were recovered from fill 144 in Ditch 3. Ditch 3 also truncated a small pit (184) (Figs. 6C and 10), which must immediately pre-date the features associated with arable production. It was filled with a brownish-grey soil (185) that contained several sherds of mid 12th-century pottery.

Ditches 4–6, which also cut soil 105, lay to the east of Ditch 3. Ditch 4 (Fig. 6E), which measured 5.5 metres long by 0.18 metres wide, was oriented N–S. It was filled with a greyish-brown soil (191), which contained late 11th/early 12th-century pottery.

The orientation of the remaining two ditches was, however, quite different. The surviving remnant of Ditch 5, which lay 2 metres to the east of Ditch 4, was oriented SE–NW while Ditch 6 was oriented SW–NE. The portion of Ditch 5 measured only 2 metres long by 0.16 metres wide and contained a dark brownish-grey fill (198) whereas Ditch 6 (Figs. 6F and 12) survived intact and extended across the full width of the excavation. The length within the excavated area measured 13 metres long and the width 0.30 metres. The ditch was filled with a greyish-brown soil (196), which contained sherds of mid 12th-century pottery.

Ditch 1 (Figs. 6A and 8) also cut soil 105 and was oriented SW–NE. It measured 7.10 metres long by 0.65 metres wide and may have been part of a property boundary. It contained two fills, a brownish-yellow primary fill (113), which had accumulated by the erosion of the ditch sides, and a dark-grey soil (111). Both fills contained 12th-century pottery.

Phase 2: (Fig. 4)

The archaeological features included within this phase suggests a change of use from arable cultivation in the late 11th to early 12th century to animal husbandry by the mid/late 12th century.

Pit 188 (Figs. 6C and 11), which cut fill 144 in Ditch 3, contained two fills, first a greyish-brown soil (189), which produced sherds of late 11th/early 12th-century pottery, and second a yellowish-brown clay with stones (199). While the pottery is likely to have been residual the archaeology would seem to suggest that arable production had been abandoned in this area close to the village.

Similarly, the location and date of finds from two other pits seem to indicate a change of land use in this period. Pit 206, which was close to Ditch 2, cut soil 105 and was filled with a greyish-brown soil (207) that produced several sherds of mid 12th-century pottery. Pit 222 (Fig. 14) was located towards the south-east corner of the site and was probably a rubbish pit, suggesting domestic occupation close by. It contained two deposits, a primary fill of dark brown soil (223), which produced pottery sherds of early/mid 12th-century date, and a secondary fill of a yellowish-brown stony soil (224), which contained no pottery.

A number of postholes, which cut soil 105, were also recorded across the excavated area. They probably represent fence lines dividing the plots, perhaps suggesting the keeping of livestock in the area. They were not large enough to indicate the presence of timber buildings on the site.

There were also five small burnt features. These have been tentatively interpreted as hearths (2–6), but it is possible that they were in fact the sites of bonfires. They were scattered across the excavated area but only a small amount of iron slag was found.

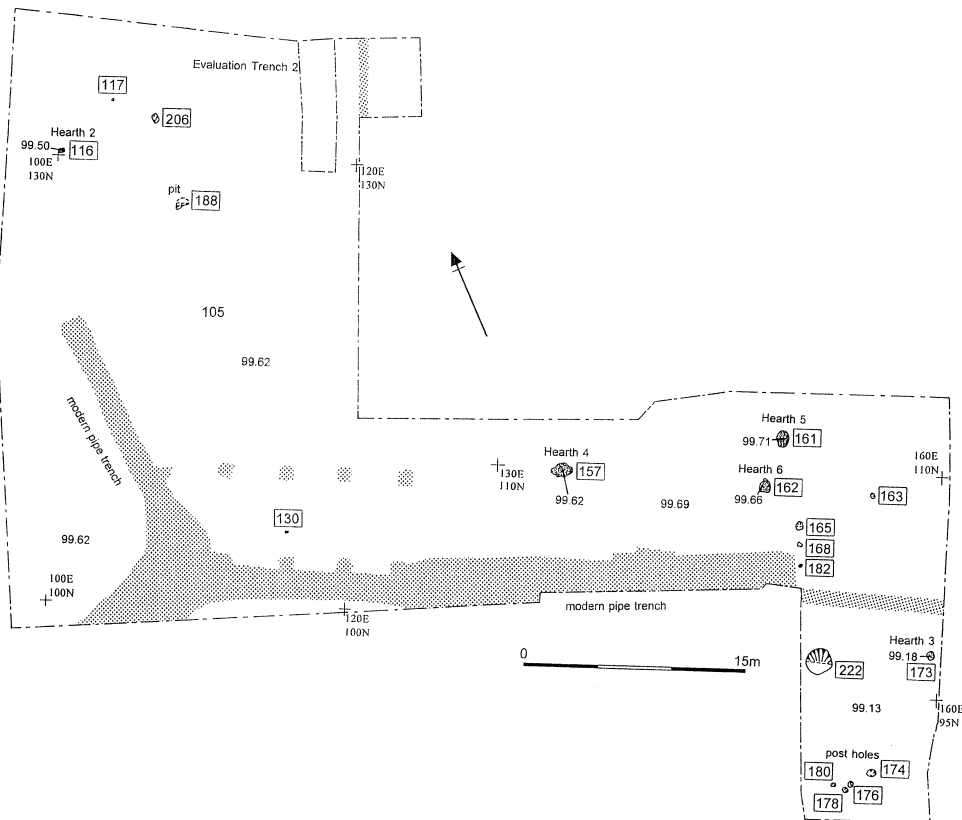


Fig. 4. Period 2 (Phase 2) features.

Period 3

The medieval archaeology to the end of the late 12th/early 13th century was sealed by two soils. One, a dark greyish-brown ashy soil (102) containing 18th-century pottery, had been deposited over a small area along the south-west edge of the excavation. The other, a mid-brown silty soil (101) containing 18th/19th-century pottery, covered much of the remainder of the site.

The features associated with this period (Fig. 5) include postholes 158 and 200. Both were filled with stone post-packing and yellow sandy mortar, but contained no finds. The mortar recorded filling the postholes closely resembled the yellow sandy mortar that bonded the stones in Walls 1 and 2.

These two walls, the construction trench (140) for which had cut a buried soil (101), sat on the surface of the sandy clay subsoil (106). They appear to represent the line of a 19th-century boundary wall, which stood only 2–3 metres to the east and north of the existing property boundaries. Deposited against Wall 1 were two layers of demolition rubble, firstly 109, a mix of gritty brown soil and orange-brown mortar fragments, and secondly 108, which was composed of crushed pale yellow limestone and fragments of brick and roof tile.

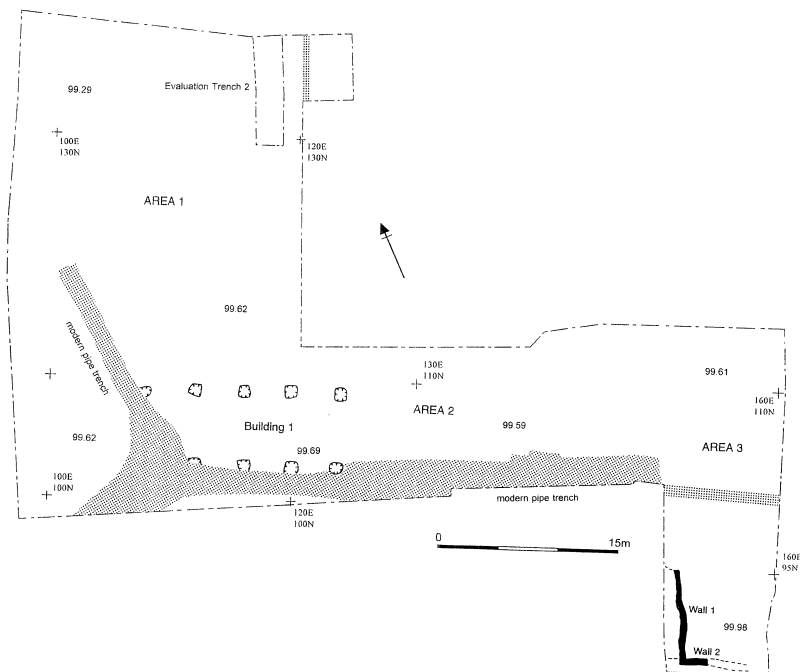


Fig. 5. Period 3: late 19th-century farm building.

The remaining archaeology comprised a series of large postholes filled with fragments of limestone and in some the remains of the timber posts. This was all that survived of a late 19th/early 20th-century farm building, possibly a cowshed. These postholes had cut soil 101, but much of that deposit no longer survived across the site due to the disturbance caused by the landscaping of the area in 1967 when the farmyard was enlarged. The ground was subsequently levelled by the deposit of a thick layer of rubble (115) (Fig. 6F), which was added to after the demolition of the farm buildings in mid 1997. The areas not sealed by 115 lay directly beneath the modern topsoil (100).

THE FINDS

FLINTS by David Mullin and Jodie Lewis

A total of eight flints were recovered from the excavation. They included four retouched pieces: two scrapers of Late Neolithic/Early Bronze-Age date and two retouched flakes. The rest of the assemblage consisted of waste flakes, one of which exhibits signs of utilization.

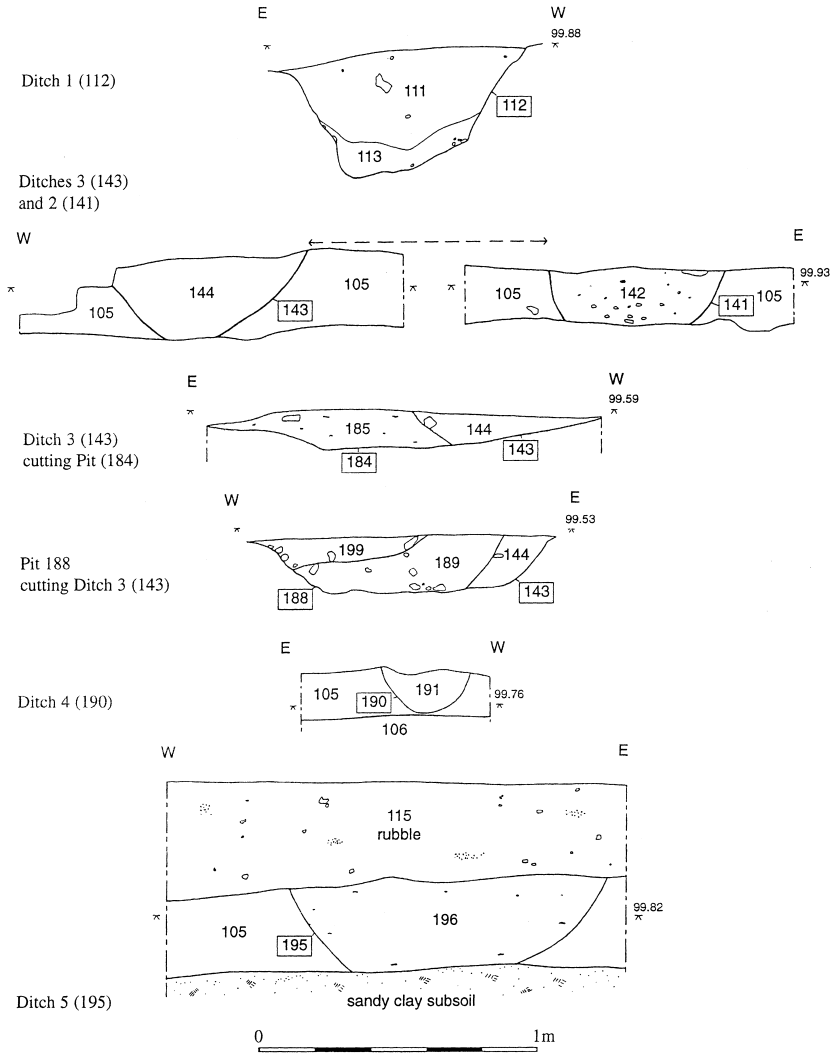


Fig. 6. Sections across ditches and pits.

Catalogue of flints

1. Utilised flake. Context 105.

Secondary flake from a blade core. The bulb of percussion has been removed and the distal end shows evidence of wear use.

2. Retouched tertiary flake. Context 105.

From a blade core, bulb of percussion removed and a small area of retouch on ventral surface.

3. Complete primary flake. Context 105.

Waste flake terminating in a hinge fracture. Thin, smooth cortex.

4. End-and-side scraper. Context 105.

Tertiary flake with pronounced bulb of percussion.

5. End-and-side scraper. Context 105.

Secondary flake with pronounced bulb of percussion. Much edge damage, probably from use. Cortex similar to 3.

6. Broken tertiary flake. Context 105.
Distal end of tertiary flake.
7. Tertiary flake. Context 194.
Small, broken waste flake terminating in a hinge fracture.
8. Retouched flake. Context 106.
Large secondary flake with retouch on the ventral surface at the distal end. Cortex similar to 3.

Raw Materials

The end-and-side scrapers 4 and 5 and the waste flakes 3 and 7 appear to be of the same raw material: black flint with some light grey speckling. The utilised flakes 1 and 8 and the blade 6 are also of similar raw materials, a translucent light brown flint. The tertiary flake 2 is the only object of opaque grey flint. The black and the translucent flint have thin, smooth cortex, perhaps suggesting derivation from gravel or boulder clay deposits. The nearest such source is the glacial deposits in the Vale of Moreton, 34 km to the north-east (Saville 1990, 154).

Interpretation

The only diagnostic pieces are the two end-and-side scrapers from context 105. These are usually found in Late Neolithic or Early Bronze-Age contexts. The width of the utilised flake 1 and the broken flake 6, both also from context 105, would also suggest a similar date. Whilst it is difficult



Fig. 7. View south across the north-west area of the excavation.



Fig. 8. Ditch 1 (112), north end, showing north-facing section.



Fig. 9. View north across south-east area of excavation, showing sondages excavated through soil horizon 105.



Fig. 10. North-facing section through Pit 184 and Ditch 3 (143).



Fig. 11. South-facing section through Ditch 3 (143) and Pit 188.

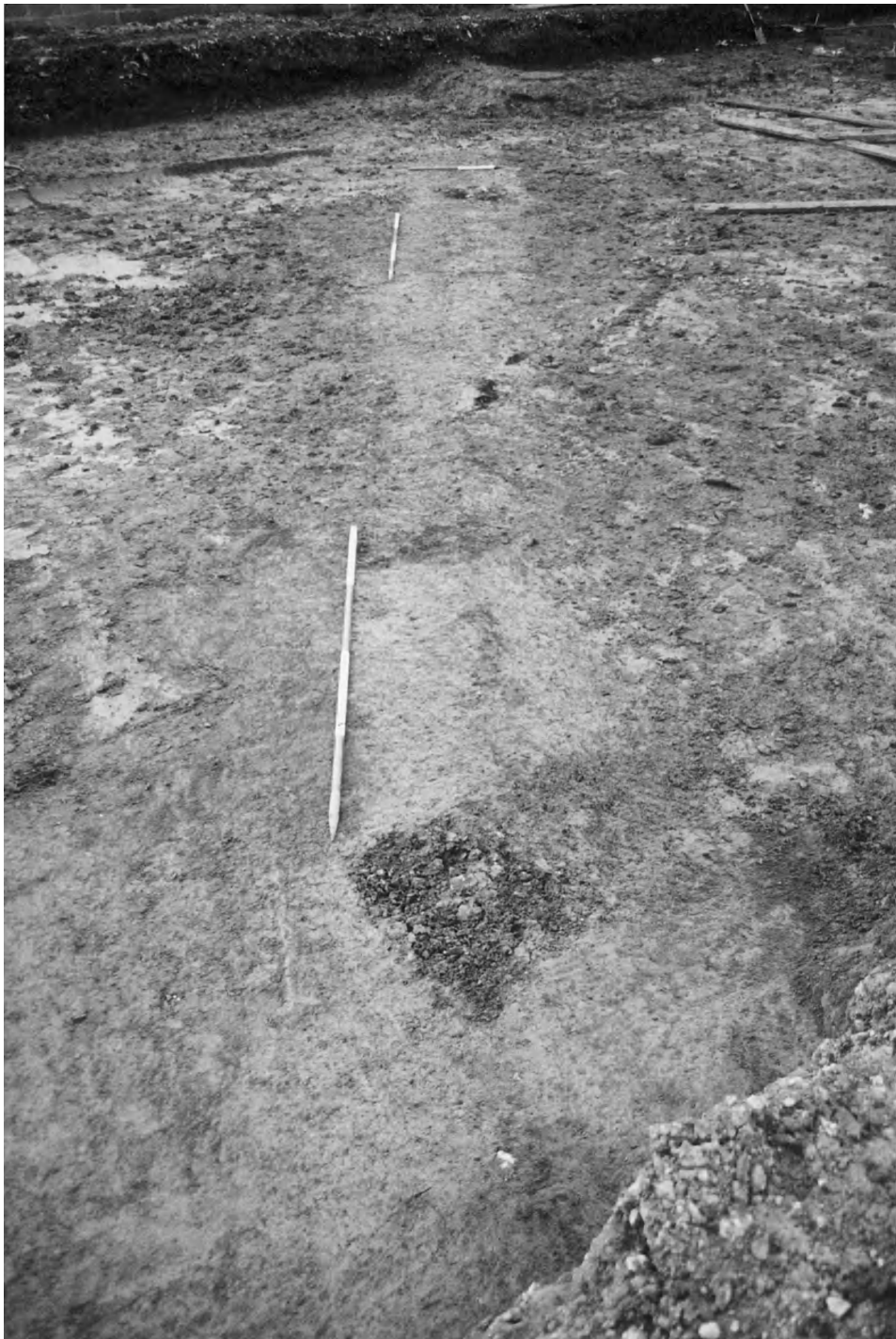


Fig. 12. View south-west along line of unexcavated Ditch 6 (195).



Fig. 13. Pit 219, showing east-facing section.



Fig. 14. Pit 222, showing north-facing section.

to interpret such a small assemblage, it is interesting that five out of the eight flints were either retouched or utilized. It is probable that the flints represent part of a larger background scatter, brought to the surface during ploughing in the medieval period.

POTTERY by Rod Burchill

The pottery material was visually examined using a hand lens ($\times 10$ magnification) where necessary. Identification was by comparison to the Hillesley pottery type series (HTF) developed by Ponsford (Williams 1987) and the Bristol pottery type series (BPT) also developed by Ponsford (1979).

The material was quantified by sherd count and weight only. This was considered the most appropriate method as the assemblage represented only a sample of the site's ceramic potential.

The Assemblage

The assemblage, from thirteen excavated contexts plus unstratified material, consisted of 322 sherds of pottery weighing 4,695 g. The material was fragmentary and some sherds showed a significant degree of weathering, although in general the amount of abrasion was low to medium. The assemblage contained 12 sherds (3.7%) of unstratified pottery. There were 4 sherds of Romano-British date, including a black burnished ware (BB1) flanged bowl, all of which were residual.

The other pottery ranged in date from the 11th to the 19th century. Post-medieval pottery was confined to the modern topsoil and its immediate subsoil. None of it is likely to be earlier than 1700. Excluding the post-medieval and Romano-British wares and a single sherd from a Tudor Green vessel of 15th-century date that was probably intrusive in context 105, the material could be dated to between the 11th and 13th century and no later than 1300.

The pottery was recovered from a series of ditches and pits and from buried soil horizon 105. Context 105 was not fully excavated but was sampled in a series of 10 test pits. It yielded 70% of the pottery recovered from the site (Table 1).

Table 1. Distribution of medieval pottery

Fabric = Hillesley type series (HTF)	1	4	5	6	7	8	9	10	11	12	15	17	18
Context													
105	16	31	13	4	3	17	31	54		2	3	36	
111	6	5	3				4	7	1				4
113								1					
142	2	1	1				2					2	
144	3			1		3							
185		2				1		4					
189	3										3		
191			1									1	
196			1				1						
207		1					1	1					
223	2						2						2
Total	32	40	19	5	3	21	41	67	1	2	6	39	6

With the exception of a North-West Wiltshire tripod pitcher in context 189 the assemblage consisted entirely of cookpot forms and West Country dishes/bee-skeps. Rims were typically upright or curved but were occasionally everted. They were mostly simple but sometimes had an external bead or internal fold. Cookpot bases were sagging and skep bases flat. Few of the vessels exhibited evidence for heating or other use.

Fabrics

Descriptions HTF1, 4–12 and 15 are based on the work of M. Ponsford (Williams 1987).

HTF1 Coarse, slightly sandy, light red to grey fabric with laminated break. Inclusions of limestone, fossil shell and fine quartz. Pitting occurs frequently giving a corky appearance. Forms include large jars with upright rim sometimes infolded. Dated by comparison to Bristol Castle fabrics to 11th century. Possibly pre-Conquest.

HTF4 Coarse, slightly sandy, corky fabric similar to HTF1 but with more scattered inclusions. Also contains red iron ores. Surfaces light red to brown and often heavily pitted. Forms include West Country dishes and jars with upright beaded rims. 11th–12th century.

HTF5 Sandy, laminated fabric with randomly distributed angular limestone and quartz. Frequent pitting of the surfaces, which are grey, black, buff or light red-brown. Jars with upright rims often infolded and West Country dishes. Similar fabrics dated 1080–1120 at Bristol.

HTF6 Sandy fabric with angular fracture containing limestone and black material (*sic*). Jars with simple upright rims and sagging bases. Probably 12th century.

HTF7 Oolitic limestone-tempered ware. Hand-built vessels date from *c.*1080 with wheel-thrown forms from *c.*1300.

HTF8 Sandy grey ware with predominantly dark inclusions and little visible limestone. Jars with upright rims and sagging bases. Dated as HTF5.

HTF9 Silty, grey fabric with fine sand, some mica and chalk fragments. Dated to not earlier than *c.*1200.

HTF10 Similar to HTF9 but coarser with some flint.

HTF11 Hard sandy fabric with buff surfaces. Inclusions of quartz and limestone. Jars with everted rim. 13th century.

HTF12 Ham Green jar fabric. Same as BPT32 (12th–13th century by form).

HTF15 North-West Wiltshire lime-gritted tripod pitcher fabric. Dated 1080–1200.

HTF17 Very sandy grey fabric with buff to brown surfaces. Abundant quartz and common red and black iron ores. Some pitting of surfaces. May be a variant of HTF8.

HTF18 Ham Green coarse fabric. Same as BPT114. Early to mid 12th century.

Discussion

Ponsford dated his Hillesley pottery type series from the nearby earthworks in Very Croft by comparison to similar material and forms from Bristol and Gloucester (Williams 1987). However, he considered that the Hillesley fabrics, although similar to the Bristol and Gloucester material, appeared to represent a largely rural group of industries. A number of similar fabrics were noted during the excavation ahead of the M5 motorway at Lower Wick (Fowler and Bennet 1973). However, most of the Lower Wick material was unstratified and neither the pottery from the 1979 excavation in Very Croft nor that from the present excavation could be independently dated. Therefore, although a later date is unlikely based on the forms present, a slightly earlier date for the assemblage cannot be precluded.

Ponsford compared HTF1 to the Bristol Castle fabrics BPT1, 3 and 115, all of which can be dated to the 11th century (Ponsford 1979). Although HTF1 appears to contain less quartz than the Bristol fabrics it is nevertheless probably related to them. Hillesley fabrics HTF 4, 5, 6 and 8 are dated to the 12th century by comparison to other Gloucestershire quartz-gritted wares. HTF 9 and 10 are dated to the 13th and 14th centuries but belong to the same limestone- and flint-

tempered group of fabrics as Bristol BPT46, Bath A and Cheddar J. These fabrics can be shown to have arrived in Bristol by *c.*1150 when they were associated with Ham Green A jugs at Dundas Wharf (Ponsford 1991). At Eckweek near Bath similar fabrics have been shown to have appeared as early as the 11th century (Young forthcoming).

The Hillesley Farm assemblage includes a quartz-gritted fabric not described by Ponsford (Williams 1987) and designated as HTF17 in the Hillesley pottery type series. The assemblage also contained a single sherd from a vessel in the coarse Ham Green fabric, in Bristol called BPT114 (Burchill forthcoming) and designated here as HTF18.

The most common form of vessel was the jar. The almost complete lack of evidence for heat damage would suggest most had been used for storage. A number of vessels with flat bases and acute basal angles were noted, mostly in fabric HTF4 but also in HTF5 and HTF10. These have been variously described as bee-skeps (Ponsford, in Williams 1987) or West Country dishes (Young forthcoming). The assemblage contained a single tripod pitcher with incised decoration in a North-West Wiltshire lime-gritted fabric (HTF15). Jugs were absent from the assemblage.

Conclusion

Most of the pottery from the site (70%) was recovered from a buried soil horizon (105). The material was predominately 11th and 12th century in date with a scattering of early 13th-century sherds and a single 15th-century piece. This suggests a period of domestic activity commencing sometime in the 11th century and ceasing at the end of the 12th century. That the assemblage consisted almost entirely of storage jars and West Country dishes perhaps suggests a low-status area of food storage and production nearby.

ENVIRONMENTAL EVIDENCE

CHARRED PLANT MACROFOSSILS by Julie Jones

As part of the excavations a series of samples were taken from features associated with late 11th- to 12th-century occupation.

Methodology

The samples, which were from pit and ditch fills, were wet sieved at the Department of Geography, University of Bristol. They were sieved to a 250-micron float and a 500-micron residue. Both float and residue were allowed to dry before examination under a low-powered microscope. The floats contained charred cereal grains, but very little chaff, and an assemblage of weed seeds. The results are shown in Table 2. Nomenclature and habitat information is based on Stace (1991) and grain and chaff determinations are based on Jacomet (1987). A quantification was made of animal bone, pottery, charcoal and slag present in the residues. This information is also shown in Table 2, together with details of sample size.

The cereal grains were in a very poor state of preservation, many having lost their outer surface and others being distorted or partially burnt away. This suggests burning in a high temperature had occurred before deposition rather than post-depositional damage. In view of this many of the grains are determined as unidentifiable to species (Cereal indet.) and others as resembling wheat (cf. *Triticum* sp.) or barley (cf. *Hordeum* sp.).

Table 2. Charred plant and other remains from 11th- and 12th-century features at Hillesley, Gloucestershire.

	Period 1			Period 2			Pit	Habitat			
	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch					
Context	121	171	187	111	142	144	191	196	198	185	
Sample	3	7	12	4	1	11	10	14	17	13	
sample size (kg/litres)	48.4/	18.5/	10.2/	14/	49/	35.3/	21.7/	4.8/	21.6/	10.4/	
float size (ml)	52	18	10	13.6	54	36	22	6	20	10	
residue size (kg)	32	7.5	13.5	13	250	45	26	4	27	3	
	10.257.5	1.25	3.9	3.25	3.75	14.75	0.12	1.02	0.3	0.49	
Cereals											
<i>Triticum</i> sp. (wheat)	10	1	21	41	208	21	31	5	8	4	20
<i>Triticum</i> sp. (tail grain)	1	2		9	12	8	4	1	1		
cf. <i>Triticum</i> sp.				7	115	22	6		8	3	
<i>Hordeum</i> sp. (barley)	3	1	1	8	35	6	3	1	11		4
<i>Hordeum</i> sp. (hulled barley)				6	12	2			1		2
<i>Hordeum</i> sp. (hulled/straight)					8						
<i>Hordeum</i> sp. (tail grain)				12	1		1				
cf. <i>Hordeum</i> sp.		2		6	4						
<i>Secale cereale</i> (rye)				1	22	3	1		2	2	
<i>Avena</i> sp. (oats)	8	7	25	24	94	39	22		10		19
cf. <i>Avena</i> sp.				14	6		2				
Cereal indet.	7	5	31	25	195	42	30	3	18	1	10
Total	29	18	81	121	733	154	97	12	58	11	55
Chaff											
<i>Hordeum</i> sp.				5							
(rachis internode base)											
<i>Secale cereale</i>				1							
(rachis internode)											
<i>Avena</i> sp. (awns)				2							
Total				8							
Weeds											
BETULACEAE											
<i>Corylus avellana</i> L. (hazelnut)								1			HSW
CARYOPHYLLACEAE											
<i>Agrostemma githago</i> L. (corncockle)											
POLYGONACEAE											
<i>Polygonum</i> sp.											
<i>Rumex acetosella</i> L. (sheep's sorrel)											
	2			1			1				1
											CD
											Ho, CG, a, sandy

<i>Rumex</i> spp. (dock)	1	1	7	2	1					
FABACEAE										
<i>Lathyrus nissolia</i> L. (grass vetchling)			1			G				
<i>Lathyrus/Vicia</i> sp. (vetch) (1.5 × 1.5 mm)			16	1		DG				
<i>Lathyrus/Vicia</i> sp. (vetch) (2 × 2mm)	2	1	31	4						
<i>Lathyrus/Vicia</i> sp. (3 x × 3 mm)			18	5						
<i>Lathyrus/Vicia</i> sp. (4 × 4 mm)			1	2						
<i>Vicia</i> cf. <i>sativa</i> L. (common vetch)			1	2						
<i>Vicia tetrasperma</i> (L.) Schreber (smooth tare)		1	2			CDG#				
APIACEAE										
<i>Aethusa cynapium</i> L. (fool's parsley)				1		C				
SOLANACEAE										
<i>Hyoscyamus niger</i> L. (henbane)	1					Bw				
PLANTAGINACEAE										
<i>Plantago lanceolata</i> L. (ribwort plantain)	1					G				
SCROPHULARIACEAE										
<i>Odontites/Euphrasia</i> (bartsia/eyebright)			1	1		CD				
RUBIACEAE										
<i>Galium aparine</i> L. (cleavers)			1			CHSo				
ASTERACEAE										
<i>Ambemis cotula</i> L. (stinking chamomile)			3	2	5					
<i>Tripleurospermum inodorum</i> (L.) Schultz.Bip (scentless mayweed)					1			3	1	CDd
CD										
CYPERACEAE										
<i>Carex</i> sp. (sedge)					1	GM				
POACEAE										
<i>Bromus racemosus/</i>										
<i>bordeacetus/secalinus</i> (smooth/soft rye brome)			1			CD				
Poaceae indet.										
Total	7	3	2	10	81	18	4	0	4	2
Other Remains										
Animal bone (fragments)	20	<30	10	c.100	20	5	3	c.40	c.40	c.15
Burnt animal bone	15			2						
Charcoal (fragments >2mm)	40	<50	20	c.40	c.30	c.15	40	c.20	c.20	c.30
Pottery sherds				17	8	7	1	2	2	9
Slag (fragments)				1	1					15

Habitats:

B: bankside; C: cultivated/arable; D: disturbed; G: grassland; H: hedgerow; M: marsh; S: scrub; W: woodland.

a: acidic; c: calcareous; d: dry soil; o: open habitat; w: wet/damp soil.

= cultivated plant/of economic importance.

*Results***Period 1**

A number of the excavated pits and postholes are thought to provide evidence for occupation prior to the 11th century, although no dating evidence was found. Three pits were sampled (contexts 121, 171, 187). These produced a few wheat, barley and oat (*Avena* sp.) grains, with other cereal grains, which were too badly preserved to identify to species. No chaff was found so it was not possible to determine whether the oats were wild or domesticated. A few vetch (*Lathyrus/Vicia* spp.) seeds were also present.

Period 2

The fills of six ditches and one pit were sampled from this period. These features cut a buried soil (105) that covered the site and is identified as part of an early medieval field system. Apart from Ditch 1, the ditches are seen as drainage gullies/strip boundaries within the field system. Ditch 1 appears to be more substantial and is interpreted as a property boundary.

Ditch 1

The yellow-brown primary fill (113) and a secondary dark grey fill (111) were sampled. Together with 12th-century pottery, both fills contained wheat, barley, oat and rye (*Secale cereale*) grains although the secondary fill was much richer with 733 grains recovered from it compared to 121 from the primary fill. The only cereal chaff recovered was from context 111 and included a single rye rachis internode and 5 barley rachis internode bases. Several oat awns were also noted.

A large assemblage of weed seeds, also from context 111, included many vetches. Like the cereal grains many of the vetches were in poor condition with their outer surface having been burnt away resulting in the loss of the hilum, an important feature in identification to species. It was, however, possible to identify smooth tare (*Vicia tetrasperma*) and common vetch (*Vicia sativa*), both species of grassy places, although it is possible that the common vetch was cultivated. This is discussed more fully later. The other unidentified vetches were measured. Those in the range of 2–3 × 2–3 mm could also be smooth tare and the larger vetches, 3 × 3 mm, are common vetch. Of the other weeds present sheep's sorrel (*Rumex acetosella*) and docks (*Rumex* spp.) are typical of grassy places and may have been growing with the vetches, although docks are also typical of disturbed ground such as cultivated fields. Together with stinking chamomile (*Anthemis cotula*) and scentless mayweed (*Tripleurospermum inodorum*), these could have been growing with the cereal crops and harvested with them.

Ditches 2–6

The fills of the other ditches contained a similar, although less rich assemblage of charred remains. Wheat, barley, oats and some rye are present in most ditches although Ditches 4 and 6 produced very scant remains. Vetches are again present in Ditch 2 and 5 with arable weeds such as stinking chamomile, cleavers (*Galium aparine*) and bartsia/eyebright (*Odontites/Euphrasia*).

Pit 184

The fill of this pit, a brownish-grey soil (185) containing 12th-century pottery, was sampled. Only 55 cereal grains and 2 weed seeds were recovered from this feature.

Discussion

The ditches sampled at Hillesley are thought to be associated with a field system of late 11th- to early 12th-century date. The evidence of the charred remains confirms the presence of crops of wheat, barley, oats and rye. These are most likely to have been cultivated in the local fields. The wheat grains have the typical rounded appearance of free-threshing bread wheats and seem to represent the most important crop here. Wheat is likely to have been the preferred food grain, although barley, grown as a spring crop, could have been used as a supplementary food or as an ingredient in making ale. However, none of the barley grains showed evidence of the sprouting necessary in the malting process. Oats, also widely cultivated as a spring crop, may have been grown with the barley, or on their own, either for food or fodder. No oat chaff was recovered to indicate whether these were domesticated or wild oats. It is possible that, as today, the oats may have been persistent cornfield weeds, together with some of the other weeds such as stinking mayweed, cleavers, corncockle and brome present in these samples. The few examples of rye suggest that it may have been a less important cereal, although it is known from documentary sources that rye was sometimes grown with wheat as a mixed crop of 'maslin'. The very few finds of cereal chaff recovered from the samples probably represent the remains of a processed crop. It seems likely that the cereals were both grown and processed locally for use on the manor or in surrounding villages.

The growing of mixed crops would not only have provided a range of cereals for food, drink and fodder but also the by-products of straw and chaff waste for fuel and building material. The cultivation of both autumn-sown crops such as wheat and rye and spring-grown ones such as barley and oats may also have provided insurance against the failure of a crop in a particular season.

The presence of a number of vetches may indicate the cultivation of these as field crops. Evidence of peas and beans, an important part of the staple diet, was not found, although a few examples of common vetch were identified. These may have been the cultivated sub-species *Vicia sativa* subsp. *sativa*, which was commonly grown for fodder. The other members of the pea family recovered, grass vetchling (*Lathyrus nissolia*) and smooth tare, could also have been grown as part of the same crop. These legumes with nitrogen-fixing properties would have been valued for their ability to improve the soil and would have been included in a crop rotation.

DISCUSSION

Fieldwork and excavations across England have produced examples of landscapes that have been modified and have also given some indications of how landscapes were organized at particular times. However, fieldwork has traditionally concentrated on examining the earthwork remains of field systems (e.g. RCHME 1975). There has also been a geographical bias in this work towards the Midlands, so most of the results inevitably relate to fields in a 'Midland' system. Also, archaeological research and rescue programmes have rarely been designed to excavate field systems, so most evidence about such systems was gathered incidentally, as was the case at Hillesley.

The open-field system of agriculture is recognized as having been flexible to a degree. Sometimes this flexibility allowed a reorganization that has left physical traces. This evidence can be grouped into two categories, first that for a thorough re-ordering of the landscape and second that for piecemeal change. We have seen that c.350 acres could have been under the plough at Hillesley in 1086, and it seems likely that the strips of arable land discovered at Hillesley Farm (Period 2: Phase 1) represent a reorganization of existing fields rather than an entirely new field system. The archaeological evidence shows that the field system appears to have developed no later than the late 11th or early 12th century. An assart or newly ploughed pasture cannot be ruled out. The site

is not far from the late 11th-century ring-work in Very Croft, 100 metres to the south-east, so it could have been part of the demesne, but it is also possible that the strips were part of the village fields. Another important consideration is the extent to which the layout of the medieval strips was influenced by the way the land had been used previously. The Orwins (1967) assumed that the open-field system had been developed to cope with the process of colonization, of creating arable land from scrub and woodland.

It has been suggested (Finn 1997) that the outer bailey bank of the ring-work in Very Croft (Fig. 1) may have continued to the north-west along the line of Vicarage Lane. If that were the case, the end of the bank would have corresponded with Ditch 1. There was, however, no evidence of a ditch associated with the outer bailey bank (Williams 1987) and Ditch 1 is unlikely to have been defensive. It could, though, be indicative of the reorganisation of property boundaries and agriculture in and around Hillesley in the late 11th/early 12th century.

The importance of the site is that it shows the strips of a medieval arable system laid out in a deliberate way, with spade dug ditches defining the boundaries of the strips. The site is also unusual because the pottery suggests a date or *terminus post quem* for the start of this process, in the late 11th/early 12th century. The laying out of the new strips could have coincided with the building of the ring-work in Very Croft or with the creation of a nucleated settlement.

The grain identified from the soil samples taken at Hillesley Farm probably represents consumption rather than production. It was burnt while it was being dried or malted or during the burning of straw. There is obviously a close relationship between the grain produced and that consumed. Figures for the types of grain grown on the demesnes of the nearby manors of Hawkesbury, Symondshall, Horsley, and Minchinhampton in the 13th and 14th centuries (Table 3) ought to indicate the types of crops that would have been grown at Hillesley, particularly as the soils, climate and landscape would have been almost identical. One can see that spring-sown crops were grown in much greater quantity than wheat. The wheat acreage was usually about 30%, but could be as little as 6%. In every case oats were the most important crop, accounting for 32–56% of the acreage. Barley and drage (a mixture of barley and oats) accounted for quite a high proportion

Table 3. Figures for types of grain grown on demesnes in the 13th and 14th centuries for Hawkesbury, Horsley, Minchinhampton and Symondshall (based entirely on the work of Prof. C. Dyer).

Manor	Wheat	Barley	Drage	Oats	Beans	Total
Hawkesbury 1386–7	72 a. (31%)	40 a. (17%)	45 a. (19%)	743/4 a. (32%)		231 a. (100%)
Horsley 1371–2	62.5 a. (28%)	20 a. (9%)	43 a. (20%)	85 a. (9%)	9 a. (4%)	2191/2 a. (100%)
Minchinhampton 1306–7	18 q. 2 b. (14%)	101/2 q. (8%)	261/2 q. (21%)	711/2 q. (56%)		126 q. 6 b. (100%)
Minchinhampton 1380–1	6 a. (6%)	27 a. (25%)	32 a. (29%)	431/2 a. (40%)		1081/2 a. (100%)
Symondshall 1283–4	45 a. 11/2 r. (32%)	6 a. 1 r. (4%)	41/2 a. (3%)	75 a. (54%)	9 a. (6%)	140 a. (100%)

a. = acres; b = bushels; q = quarters; r = roods

(7–54%), especially in the late 14th century. Rye was scarcely grown and not many beans and peas. In the 13th and 14th centuries vetch was grown a field crop elsewhere, but not in this part of Gloucestershire.

The analysis of soil samples taken from deposits on the site confirmed the cultivation of cereal crops in the local fields during the 11th and 12th centuries. Crops grown included barley, oats, wheat, rye, hemp, flax and beans. There is some similarity between the environmental samples from Hillesley and the later figures from neighbouring villages – there were lots of wheat and oats in the charred grain samples and quite a lot of barley, but there was more rye than might have been expected. Perhaps more rye was grown on peasants' land than on the demesne. The figures in Table 3 all come from demesne land. Also, the archaeological evidence relates at least in part to an earlier period. Perhaps there were crop changes between c.1100 and the 13th century.

For the neighbouring village of Hawkesbury there is a survey of the 14th century (The National Archives: PRO, SC11/230) that refers to fields arranged in a two-course rotation. This suggests a considerable area of open field, but the fields have names like 'Haycroft' and 'Brecke' and there are references to assarts and 'new waste inclosed', indicating a good deal of inclosure and clearance of land for cultivation presumably in the 12th and 13th centuries. Hillesley probably had a similar system, i.e. areas of open-field land divided into furlongs and strips and areas of crofts and other enclosures. The excavated strips could belong to that part of the village's territory in open fields, but one needs to remember that land in crofts or enclosures was also ploughed in strips or selions.

Farming was mixed. Livestock included cattle, oxen, sheep, poultry and pigs, some of which grazed on common land and on the strip fields when fallow. In the early 14th century there were 36 oxen, 23 cows, 25 other cattle and 43 pigs on the demesne at Hawkesbury. Elsewhere large numbers of sheep were kept – 240 at Symondshall in 1283–4 and 612 at Minchinhampton in 1306–7. An increase in sheep farming need not lead to the abandonment of arable cultivation but what explains the cessation of arable cultivation at Hillesley Farm (Period 2: Phase 2)? Sheep rearing and corn growing were complementary. Sheep fed on the stubble and manured the land. The cessation of cultivation probably relates more to land management than to a wholesale change from arable to pasture, such as happened in many places in the 15th century when populations were smaller, labour was in short supply and corn prices were low.

In the Middle Ages honey was collected from the woods and was produced in hives. There is evidence of this at Hillesley Farm where pottery sherds from bee-skeps/West Country dishes were found in some of the 12th-century deposits on the site.

By the mid/late 12th century Ditches 1–6 had been either deliberately backfilled with plough soil or were no longer regularly maintained. In either case, whether through deliberate abandonment or neglect, the use of the land for arable farming ceased and it became pasture. The survival of the early medieval features is testament to the end of ploughing on the site. This change of land use is likely to have been very localized and site specific. Perhaps the arable was converted into grassy paddocks in which sheep or cattle could be kept in the winter or into lambing pens. Occasionally the signs observed within open fields of a contraction in the area of cultivated arable clearly mark a change in land use. For example, in both Northamptonshire (RCHME 1975) and Wiltshire (Gingell and Gingell 1981) there are sites where later medieval stock enclosures and sheep folds overlie ridge-and-furrow on the higher valley sides. A similar change may have occurred at Hillesley by the end of the 12th century.

The lack of any archaeological deposits or features at Hillesley Farm from the 13th century to the 18th/19th-century suggests the absence of any major change of land use for about 600 years. Indeed, both the Hawkesbury tithe map of 1840 (Gloucestershire Record Office, P 170/SD 2/1) and an Ordnance Survey map of 1886 (6", Glos. LXIV.NE.) confirm that the Hillesley Farm site was still used as a paddock in the mid and late 19th century.

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