Facing the Palace

Excavations just east of Fishbourne Roman Palace (Sussex, UK) 1995-1999

for the Sussex Archaeological Society

by John Manley and David Rudkin

with contributions from

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ADS Digital Supplement

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Phase AJ: 13th to 14th century - the robbing of the foundations of Building 3

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Figures and Tables

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10. Plan showing the co-ordinates of the grid system based on eastings and northings
11. Birthday celebrations during the 1995 season – photograph
12. Richard drawing a small section in 1996 – photograph
13. Corinne sieving for small finds in 1996 – photograph

Abstract of the 1995-1999 excavations

Excavations immediately to the east of Fishbourne Roman Palace (Area A) revealed the complete ground plan of a courtyard building lying very close to the front of the later Palace. The building, known as Building 3, was classical in design and aligned east to west. Dating evidence is not particularly precise, but it is suggested that the building was constructed in the second half of the 1st century AD. The function of the building is problematic, although various strands of evidence suggest that the building probably had a public or an administrative function, and may have been constructed by the military. The building seems to have survived in front of the Palace (which was constructed around AD75) perhaps until the end of the 2nd century AD. A complex series of deposits, finds and structures was uncovered to the immediate north of the building.

A small trench (known as Area B) was excavated a little way to the north of Building 3. A ditch ran east to west across the trench. A mixture of imported fine wares and indigenous coarse wares from the bottom of the ditch suggest the ditch was dug prior to AD43, perhaps as early as the first decades of the 1st century AD. The relationship between Building 3 and the ditch in Area B is not yet known.

A full range of edited specialist reports is provided in this publication, including a reconstruction of the original appearance of Building 3. In addition, maps illustrating the spatial distribution of various categories of small finds have revealed a considerable amount about specific human behaviours and site-formation processes. The report concludes with an appraisal of the Fishbourne in the early Roman period, and has relevance for the study of the conquest in AD43.

Format of this report

The specialist reports provide detailed descriptions of different categories of artefact and environmental evidence found during the excavations. It will be quickly appreciated that the majority of artefacts (with one or two exceptions such as the flint objects) were found to the north of Building 3. **(Note that the artefact distribution maps printed in this report were produced using GIS software. Artefacts that did not have precise three-dimensional co-ordinates, for example because they were just ascribed a context number, were excluded from these maps; this is the meaning of 'selected' in the captions accompanying these maps).** This also applies to some kinds of environmental evidence such as food debris represented by oyster shells and animal bones. Many of these items appear to have been deposited as part of a midden, which was building up to the north of the aqueduct in the latter part of the second century AD. The midden was presumably (although not definitely) formed by rubbish derived from the Palace next door. Other finds were deposited in particular features, such as the aqueduct, the stream and the fills of robber trenches. In all categories of finds it was difficult to associate objects with Building 3 itself.

Since Area B is a smaller excavation, separate from the main site of Area A, when there are significant references to Area B, both within the main stratigraphic report, and in the specialists' reports, these will be highlighted by the use of shading, as in this sentence. This device is adopted since future excavations will explore a larger area (called Area C) around Area B. These future excavations will be published separately, and the use of shading in this report will

allow the reader to integrate the results from the two sites (i.e. Areas B and C) and from the two publications more easily.

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Part 1 – the excavations

Phase AA: The prehistoric flintwork – by Chris Butler

Over the five seasons of excavation at Fishbourne, between 1995 and 1999, a total of 597 pieces of prehistoric flintwork was recovered (*see* Table 51 and Figs. 20 and 21).

Raw Material: There were two types of flint raw material.

1. A grey, brown or blue-black colour, some having olive or orange-brown patches. Where present, cortex is smooth and a cream to off-white colour. This type derives from nodular flint, possibly originating from Clay-with-Flints outcrops on the nearby Chalk, and from the Coastal Plain.

2. A brown, red-brown or black-brown flint which has on occasions patinated to a white or blue-grey colour. The cortex, where present, is rough and abraded and can be either grey or brown in colour. This type derives from a pebble flint, probably originating from the local gravel deposits.

Debitage: Almost all of the assemblage (94%) is made up of debitage. The flakes are generally quite small, and tend to be long and narrow, only a minority are large and broad. Although the majority of the flakes are hard hammer-struck, 29.5% are soft hammer-struck; furthermore, almost all of the blades and bladelets are soft hammer-struck. A large number of the blades, and some flakes, together with most of the bladelets, exhibit small scars on the dorsal side at the proximal end, as a result of core platform preparation. The larger, hard hammer-struck pieces tend to have the most cortex remaining, whilst the soft hammer-struck blades, bladelets and small flakes have the least. Some of the larger hard hammer-struck flakes are primary flakes, having their entire dorsal side covered with cortex. Four axe-thinning flakes were also recovered.

There are a significant number of flake and blade fragments (15.7% of the assemblage) and a small number of shattered pieces; most of which appear to have been broken in antiquity, although some may have been broken more recently. Thirty-five pieces of debitage (6%) have been retouched, generally just along part of one edge, or at the shoulder of the piece. In a minority of cases the retouch has taken place long after the piece's manufacture, as the retouch cuts the patination; one of these has been retouched to create a small end scraper.

Cores: Ten cores were found during the excavation. Three were two-platform bladelet cores with opposing prepared platforms (1 - SF 107), whilst there was also a single-platform bladelet core (2 - SF 491); all of these are Mesolithic type cores. Two of the flake cores were small; one was a beach pebble. One of the blade cores had its two platforms at 90° to one another, a typical early Neolithic type (3 - SF 137). A single-core rejuvenation flake had been removed with a soft hammer, and may have come from a blade core.

Implements: Very few implements were found during the excavations (Table 51), and make up only 6% of the assemblage. The five microliths are all obliquely-blunted types (4 – SF 112; 5 - SF 164; 6 - SF 569; 7 – SF 600; 8 – SF 11672) and, in the absence of any geometric microliths, probably date to the earlier Mesolithic. Amongst the remaining implements, two notched pieces

were manufactured on small, soft hammer-struck flakes (9 - SF 555 and 10 - SF 9485), and a side scraper (11 - SF 944) and backed knife (12 – SF 803) were manufactured on large blades. It is possible that these may be Mesolithic in date, whilst the heavily patinated backed blade may even be late glacial.

Two hard hammer-struck flakes had been retouched along opposing edges, in one case with abrupt retouch on one edge and semi-abrupt retouch on the other (13 - SF 418). It is likely that these pieces were intended as backed knives. The remaining scrapers (14 - SF 576 and 15 - SF 684), notched pieces (16 - SF 9549) and miscellaneous retouched pieces, together with the button scraper (17 - SF 395), are likely to date from the later Neolithic/Bronze Age.

Distribution: The plot of selected flints displays a completely different distribution pattern to that of most other categories of small finds (Figs.16,17,18). Most of the flint finds were located in the area of Building 3 itself. In particular, there were significant concentrations of residual flints from the higher contexts overlying the eastern range of Building 3. Flint finds at deeper levels occurred in the lower levels of the stream. It is notable that the only concentrations of flint finds that were not residual occurred in two small clusters to the south of Building 3. Very few flint finds, by contrast, were recovered from the Roman midden contexts at the northern end of Area A. The distribution of four categories of flint finds is given in Figure 18. The two clusters to the south of Building 3 show up particularly well. The western cluster has a high number of worked flakes, while the eastern cluster has a high number of blades. Whether these differences relate to activities centering around pit 56 is problematic. In the bar-chart which indicates contexts with more than nine individual flint finds, the contexts with most flints are: C3 – an upper context covering the whole of the area of the 1995 excavations; C38 – an area running the length of the 1995 trench south of Building 3; C55 - an area of orange soil to the west of pit 56; C202 – an upper context covering the whole of the area of the 1996 dig; C240 – an upper context at the northern end of the 1996 dig.

Discussion: Most of the assemblage has come from post-Roman and Roman contexts, and is therefore residual and redeposited. Those pieces from most other contexts also appear to be redeposited, except for three pieces in context 56 and the clusters to the south of Building 3.

Up to one third of the assemblage can confidently be assigned to the Mesolithic, and it is likely that some of the remaining pieces in the assemblage are also of this date. The large number of bladelets and bladelet fragments, together with the bladelet cores suggests that microlith production was taking place here, although no microburins were recovered. The five completed microliths, were all obliquely-blunted types, and three were large specimens, typical of those which occurred in the earlier Mesolithic. The previous absence of microliths from the Sussex Coastal Plain has been noted (Pitts 1980), although more recently a cluster of Mesolithic flints, including microliths, was recovered on the Fishbourne Bypass (Goodburn 1996).

There was no evidence for the production or use of tranchet axes from the flintwork recovered during the excavations, although examples have previously been found at Fishbourne (Wymer 1977). It is possible that some of the axe-thinning flakes found may be Mesolithic. Tranchet axes and other core implements, such as picks, have frequently been found on the Sussex Coastal Plain (Pitts 1980).

The majority of the pieces in the assemblage, which are predominantly hard hammer-struck flakes, together with most of the larger flake-based implements, are likely to have originated in the later Neolithic/Early Bronze Age, or possibly even later in the Bronze Age. As the assemblage is predominantly residual, and these pieces lack firm diagnostic indicators, it is

difficult to be certain. Dating is made even more difficult owing to the smaller size of the raw material being used, especially when it is compared to a downland assemblage.

Three pieces (two hard hammer-struck flakes and a shattered piece) in context 56 are probably from the same nodule of Type-1 flint, and are likely to have come from the same flaking episode. As they have little patination, and do not appear to have been damaged after being discarded, it is likely that they were deposited here shortly after being removed from the core. The remaining pieces of flintwork in this context comprised a mixture of redeposited Mesolithic and later debitage.

Table 51 Prehistoric Flintwork

Type	***Year of excavation***	***1995***	***1996***	***1997***	***1998/9***	***Total***
Hard hammer-struck flakes		19	106	53	53	231
Soft hammer-struck flakes		15	38	30	14	97
Hard hammer-struck blades			3			3
Soft hammer-struck blades		6	18	4	4	32
Bladelets		11	17	15	5	48
Fragments		13	26	34	21	94
Shattered pieces		7	13	3	5	28
Chips		1	6		2	9
Axe-thinning flakes		1	2	1		4
Burin spalls		1	1		1	3
Core-rejuvenation flake		1				1
Single-platform flake core		1				1
Two-platform flake core		1				1
Three-platform flake core			1			1
Single-platform blade cores			1	1		2
Two-platform blade core		1				1
Single-platform bladelet core			1			1
Two-platform bladelet cores		1	1	1		3
End scrapers			4	2	4	10
Side scrapers			1	1	1	3
Button scraper			1			1
Notched pieces		1	1	2	3	7
Knife				1		1
Backed knives		2		1		3
Microliths		2	2		1	5
Misc. retouched pieces		3	2			5
Fabricators			2			2
Total		***87***	***247***	***149***	***114***	**597**

Figures

Phase AB – Building 3

Section 5 (Fig. 26):

Wall comments: The remains of the wall on the surface had an average width of *c*.0.7m. It was noticeable that greensand facing-stones were not much in evidence on this length of wall. Nor was there any evidence for the use of mortar as a bonding agent.

Section comments: The section could not be bottomed because of the rising water-table. However, the section indicated that the foundations comprised nodules of angular flint, laid down in a foundation trench that had the same width as the wall foundation. The foundation depth observed was *c*.0.9m, and observations recorded elsewhere in this report suggest that the foundations would have continued downwards another 0.1 to 0.2m.

Section 6 (Fig. 27):

Wall comments: The remains of the wall on the surface had an average width of *c*.0.7m. It was noticeable that greensand and chalk facing-stones were utilised on this length of wall. Greensand facing-stones were used on both faces, but more so on the north; chalk facing-stones were used on both faces, but more so towards the western end of the wall. There was evidence that mortar had been used in horizontal layers during the construction of the foundations. This was the only length of wall in which chalk facing-stones had been used.

Section comments: The section could not be bottomed because of the rising water-table. There were indications of the use of mortar as a bonding agent, particularly in the upper half of the section. There was also clear evidence that the foundation trench had been wider than the actual wall construction, and that context 60 - a deposit of red clay, (redeposited from the Reading Beds clay in which the foundation trench had been dug), had been placed in the top of the foundation trench on the external side of the wall. It was observable that the wall foundations were not vertical and appeared to have slumped (in the upper part) towards the north. Whether this happened during construction (and was therefore corrected), or during the life of Building 3, or after Building 3 had been demolished is difficult to ascertain. The foundations at this point were at least 1.3m in depth. This section should be compared with section 13, some five metres to the east.

Section 9 (Fig. 28):

Wall comments: This section of wall was formed by contexts 8 (southern part) and 9 (northern part). The southern length of wall (8) extended for about one metre north of wall 7. It was different in construction in that it contained a much higher percentage of greensand stones than normally found on top of the foundations. These greensand stones occurred both in the facing (east side) and in the core-work, and appeared to have been deliberately placed to achieve a flat surface. This prompted speculation that this section of wall might have been the base for a threshold, and hence a doorway, providing access to the south-western room. The northern part of this wall (9) contained few facing-stones and was similar to wall 5 in appearance. At the very northern end of wall 9 Alec Down recorded several large flint blocks which he interpreted as some sort of 'buttress', (Cunliffe *et al*.1996, 19).

Section comments: The wall foundations were *c.* 0.75m in width. The foundation trench had been dug into Reading Beds clay and was wider at the top than the width of the wall foundations. On both sides of the upper foundation trench, redeposited red clay (contexts 45 and 49) had been placed adjacent to the sides of the foundations. The overall depth of the foundations was *c.* 1m.

Section 12 (Fig. 29):

Wall comments: This wall (C275) was one of the two cross-walls in the eastern end of Building 3. Its foundations had been largely robbed out in antiquity, apart from the very bottom course of flint nodules. The surface recorded, therefore, was the top of the robber trench. This comprised a selection of smaller flint nodules and plentiful evidence of mortar flecks. This suggests that these foundations were originally mortared, and that most of the larger flints had been removed by the robbers for buildings elsewhere.

Section comments: The foundation trench for the wall was the same width as the wall foundations and therefore had vertical sides. It was *c.* 0.6m wide, by *c*.0.85m deep and suggests a wall of slighter construction than the external walls. The robber trench was the same width as the wall foundations. There was a concentration of mortar flecks 0.6m from the top of the robber trench, lying on top of the surviving bottom course of the wall foundations.

Section 13 (Fig. 30):

Wall comments: The wall in this section is composed of three different contexts: from west to east, C222 - intact wall foundations with greensand and occasional chalk facing-stones; C298 - an irregular area of tumbled flint nodules measuring about 1m square; C259 - the top of the backfilled robber trench which continues to the south-east corner of Building 3. In C222 there was extensive use of mortar as a bonding agent. Towards the east end of C222 was a concentration of greensand, which, together with the abrupt change to the flints of C298, could be indicative of a doorway. However, an alternative explanation would see the flints as the western end of a robber trench. The fill (C259) of the robber trench contained only 5% angular flints, up to 100mm in length.

Section comments: This is the deepest section of wall foundation, reaching a maximum depth of 1.3m. The upper half of the wall foundations had been robbed out in antiquity, leaving the fill (C259) of the robber trench apparent in the section. Underneath the robber trench fill was a deposit of mortar flecks, and underneath that the lower courses of the wall foundation (C222). It is noteworthy that the lower half of the foundations were built to a wider gauge (0.9m) than the wall that they were to support. Presumably this was because the builders recognised that this south-eastern part of the site was the lowest and therefore more prone to problems of flooding

and potential subsidence than elsewhere. It was apparent that at least on the southern, external side, the foundation cut had been wider than the wall. The gap had been filled with redeposited red clay (C223).

Section 14 (Fig. 31):

Wall comments: This length of wall (C263) marks the eastern end of Building 3. It had been entirely robbed out in antiquity and therefore there were no wall foundations to record. The presence of mortar in the backfilled robber trench, however, indicates that the wall foundation was mortared. Practically all the larger flint was taken by the robbers and the top of the robber trench was characterised by a silty-clay deposit, containing a few flint fragments up to 70mm in length. As a result, it was sometimes difficult to distinguish the sides of the robber trench on the surface, since the fill of the latter merged with the deposits on either side.

Section comments: The section through the filled robber trench (C234) indicates that the wall foundations were *c.*0.85m deep and *c.*0.7m wide. There were no indications that the foundation trench was wider than the actual wall foundation itself.

Section 15 (Fig. 32):

Wall comments: This length of wall foundation (C261) was half robbed out in antiquity and therefore its surface was similar to that recorded in Section 14. The presence of mortar indicates that this section was mortared.

Section comments: The section illustrates how the upper half of the wall foundations were robbed, and the space backfilled with C232. The lower half of the wall foundations (C261) were intact and comprised large flint nodules. Overall dimensions indicate that the wall foundations were *c.*7m wide and 1m deep. There are no indications that the foundation trench was wider than the actual wall foundation itself.

Section 16 (Fig. 33):

Wall comments: This wall foundation (C251) is the internal corridor wall on the north side of the building. Most of this wall foundation had been entirely robbed out, but a small section survived partially intact at its eastern end. The top courses of the wall foundation had been robbed even here, so it was not possible to observe the presence or absence of facing-stones.

Section comments: The section illustrates a trench-built wall foundation 0.8m wide by *c.*0.85m deep. However, traces of red clay lining the tops of a wider foundation trench were observed further to the west along this same length of wall, showing that variable foundation methods were used on the same wall in close proximity. The presence of mortar indicates that the wall foundations were mortared.

Section 18 (Fig. 34):

Wall comments: The main north wall of Building 3 comprised contexts 241 (eastern end) and 411. In the eastern end no facing blocks were located on top of the wall foundations, while in the western half, greensand facing blocks, as usual dressed on the external side, had survived. Occasional flecks of mortar indicate that these wall foundations were mortared.

Section comments: The excavated section through C241 suggests a trench-built wall foundation. However, traces of red clay lining the tops of a wider foundation trench were observed further to the west along this same length of wall, showing that variable foundation methods were used on the same wall in close proximity. The wall foundation measured some 0.6m in width and was about 1m deep. The wall foundation consisted, as usual, of medium to large nodules of flint. Although the flint is not faced, it is possible that sharp ends to the flints had been chipped off.

Section 105 (Fig. 35):

Wall comments: This wall foundation (C411) is the principal external western wall of Building 3. The wall foundations were well preserved, with greensand facing-stones surviving on both sides of the wall. There were no traces of mortar in the foundations.

Section comments: The foundation trench was the same width as the foundation wall it contained. Angular flint nodules (C411) comprised the foundation fill, and the surviving dimensions of the foundations were 0.9m deep by 0.5m wide.

Section 106 (Fig. 36):

Wall comments: This length of wall (C413) forms the eastern side of the north-western room in Building 3. The wall had occasional greensand facing-stones surviving. At its southern end two large pieces of greensand defined the end of the wall, similar to the 'buttress' feature recorded by Alec Down on the northern end of wall 9. There were no traces of mortar apparent.

Section comments: The section indicates that the foundation trench was wider than the wall foundation, especially on the eastern side. This was infilled and topped with a thin deposit of red clay (C450). The foundations did not appear to be properly aligned with the wall above them, which was constructed slightly to the west of the foundations. This may have been a surveying error when the building was laid out. The foundations overall measured *c.* 0.7m in width by 0.9m in depth.

Section 107 (Fig. 37):

Wall comments: This wall foundation (C412) formed the southern side of the north-western room in Building 3. There was no evidence of mortar and very few greensand facing-stones survived; the facing on the surviving greensand stones was poorly executed. In some places it appeared that flints had been used as facing-stones. The higher quantity of soil in this wall foundation suggested a poorer construction technique.

Section comments: The section illustrates that the foundation trench was wider on the south side than the wall foundation itself and had consequently been backfilled with redeposited clay (C449). Overall dimensions of the foundations were 1.1m in depth and 0.7m in width.

Section 108 (Fig. 38):

Wall comments: This wall foundation is the northern wall (10, 414) of the south-western room of Building 3. Greensand facing-stones survived well in the middle section of the wall giving the appearance of a well-laid foundation wall. There was no evidence of mortar.

Section comments: The section illustrates that the foundation trench was wider on both sides than the wall foundation itself and had consequently been backfilled with redeposited clay (C455, C448). Overall dimensions of the wall foundation were *c.*1m deep and 0.8m in width.

Section 109 (Fig. 39):

Wall comments: This wall foundation (C411) was for the principal external western wall of Building 3. The wall foundations were well preserved, with greensand facing-stones surviving on both sides of the wall. There were no traces of mortar in the foundations.

Section comments: The section indicates that the foundation trench was the same width as the foundation wall it contained. Overall measurements were *c.*0.9m deep and 0.5m in width. As well as angular flint nodules there were occasional water-worn beach pebbles in the foundation material.

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56. The western wall of Building 3, from the north – photograph
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59. Sally and the western external wall (411) of Building 3, from the south – photograph
60. The boundary wall extending south from Building 3, cut by the stream – photograph
61. The northern boundary wall of Building 3 in 1998 from the south – photograph

Phase AB – Post-holes (rows 1 & 3)

Table 52 Phase AB – post-hole rows 1 and 3

Row	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
1	462	466	0.3	0.4	0.2	very different fill from other post-holes	greensand; flint cobbles; tile
1	n/a	531	0.4	0.45	0.3	excavated 1983	Exc. by A Down
1	n/a	533	0.65	0.5	0.25	excavated 1983	Exc. by A Down
1	594	595	0.6	0.67	0.15		red sandy clay
1	628	637	0.5	0.4	0.07		red/brown sandy clay
1	629	636	0.55	0.6	0.2		red sandy clay
1	856	867	0.35	0.5	0.13		red sandy clay
1	857	868	0.5	0.65	0.15		red/yellow sandy clay
1	882	893	0.66	0.43	0.22		red sandy clay
1	883	894	0.34	0.38	0.12		red sandy clay
1	884	895	0.43	0.3	0.1		red sandy clay
1	965	966	0.25	0.25	0.2	Observed in section; could be just the post-pipe? Not illustrated	brown sandy clay
3	n/a	528	0.6	0.48	0.25	excavated 1983	Exc. by A Down
3	n/a	context	0.6	0.6	0.35	excavated 1983	Exc. by A Down
3	640	641	0.5	0.5	0.35		red/yellow sandy clay
3	642	643	0.6	0.4	0.2		red/yellow sandy clay
3	644	645	0.55	0.45	0.25		red/yellow sandy clay
3	859	861	0.54	0.5	0.3		yellow/brown sandy clay
3	872	875	0.5	0.47	0.27		red sandy clay
3	885	888	0.4	0.4	0.28		red sandy clay
3	886	887	0.38	0.3	0.25		red sandy clay

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62. Phase AB – row 1 post-hole plans and sections
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77. The sump (621) (Phase AC), from the east – photograph

Phase AC – Robbing of northern or boundary flanking wall

Figures

80. The robbed out end of the northern boundary wall (Phase AC), from the south - photograph

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Phase AD – Post-holes (row 2)

Table 53 Phase AD – post-holes row 2

Row	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
2	654	655	0.36	0.54	0.24		grey/brown silty clay; packing stones
2	651	652	0.58	0.68	0.36		silty clay; packing stones
2	545	530	0	0.5	0.5		yellowish brown clayey sand
2	n/a	532	0.52	0.39	0.42	excavated 1983	Exc. by A Down
2	n/a	534	0.56	0.6	0.33	excavated 1983	Exc. by A Down
2	632	n/a	0.5	0.5	0.2		red clay

Row	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
2	631	634	0.4	0.4	0.2		clay fill
2	630	635	0.5	0.6	0.3		yellowish/brown/red sandy clay
2	876	889	0.42	0.37	0.25		red clay
2	877	890	0.43	0.35	0.23		yellowish/brown/red clay
2	878	891	0.3	0.34	0.25		red clay
2	881	892	0.33	0.33	0.3		yellowish/brown/red clay
2	862	864	0.3	0.3	0.08		pinkish clay fill
2	854	865	0.5	0.4	0.2		pinkish clay
2	760	808	0.35	0.3	0.1		high clay content
2	871	874	0.5	0.5	0.3		no fill desc.
2	870	873	0.5	0.58	0.11		brownish/yellow sandy clay
2	860	866	0.47	0.5	0.17	lots of charcoal	

Figures

86. Phase AD – row 2 post-hole plans and sections
87. Phase AD – row 2 post-hole plans and sections

Phase AE – Post-holes (rows 4 & 5)

Table 54 Phase AE – post-holes row 4

Row 4	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
4	656	655	0.45	0.7	0.25		dark brown silty clay/flint packing
4	648	649	0.5	0.5	0.25		dark brown silty clay
4	n/a	525	0.6	0.6	0.2	excavated 1983	Exc. by Alec Down
4	n/a	526	0.7	0.7	0.3	excavated 1983	Exc. by Alec Down
4	544	527	0.58	0.6	0.4		dark brown clay sand
4	571	572	0.55	0.7	0.4		brown fine sand
4	573	574	0.67	0.5	0.35		large flint packing stones
4	575	576	0.67	0.65	0.5		poss impression of pp; flints in side

Row 4	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
4	582	583	0.45	0.25	0.25		not like the other *post-hole*s
4	722	721	0.75	0.35	0.35		fine silty soil
4	746	795	0.54	0.51	0.33	0.2 by 0.21 pp	poss pp (post-pipe)
4	747	796	0.6	0.6	0.32		yellowish-brown sandy clay
4	748	809	0.6	0.48	0.34		yellowish-brown sandy clay
4	841	842	0.26	0.3	0.25		no desc. available
4	835	849	0.6	0.63	0.24		yellowish-brown sandy clay
4	836	843	0.5	0.5	0.24		yellowish-brown sandy clay/flint packing
4	829	848	0.36	0.37	0.21		greyish brown sandy clay
4	828	847	0.38	0.4	0.2		greyish brown sandy clay
4	762	798	0.57	0.5	0.26	0.38 by 0.25 pp	pp; brown sandy clay
4	761	799	0.6	0.57	0.17	0.29 by 0.25 pp	pp - 0.25 E-W; brown sandy clay
4	832	846	0.61	0.65	0.2		dark yellowish brown sandy clay
4	755	800	0.64	0.67	0.23	0.25 by 0.25 pp	pp; pale brown sandy clay
4	754	801	0.33	0.36	0.16	0.23 by 0.2 pp	pp; yellowish brown sandy clay
4	834	845	0.42	0.34	0.14		brown sandy clay
4	827	844	0.52	0.56	0.16		brown sandy clay

Table 55 Phase AE – post-holes row 5

Row 5	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
5	n/a	522	0.85	0.85	0.27	excavated 1983	Exc.by Alec Down
5	n/a	523	0.8	0.8	0.25		yellowish brown silty sand
5	543	524	0.7	0.7	0.45		dark brown clayey sand
5	567	568	0.8	0.85	0.45		dark yellowish brown sandy clay; packing stones
5	569	570	0.65	0.8	0.45		yellowish brown clay loam
5	724	723	0.75	0.65	0.29	0.25 by 0.2 pp	pp; grey brown sandy clay
5	744	790	0.86	0.81	0.3	0.18 by 0.13 pp	pp;pale brown sandy clay; one large packing stone
5	743	791	0.76	0.85	0.3	0.34 by 0.44 pp	pp;dark yellowish brown sandy clay
5	742	792	0.6	0.8	0.26	0.21 by 0.19 pp	pp;pale brown sandy clay
5	741	793	0.9	0.55	0.3	0.3 by 0.2 pp	pp;dark yellowish brown sandy clay

Row 5	Deposit	Cut	N-S	E-W	Depth	Comment	Fill
5	730	731	0.6	0.8	0.45	0.25 by 0.23 pp	pp;dark yellowish brown sandy clay; packing stones
5	740	773	0.8	0.8	0.2		dark yellowish brown sandy clay
5	739	776	0.9	1	0.3	0.4 by 0.33 pp	pp;dark yellowish brown sandy clay
5	738	774	0.85	0.8	0.25	0.35 by 0.25 pp	pp;dark yellowish brown sandy clay
5	737	777	0	0	0		may not be a post-hole
5	736	784	0.7	0.7	0.2	n/a	pp; no desc. available
5	735	787	0.7	0.7	0.15	0.16 by 0.17 pp	pp; dark yellowish brown sandy clay
5	753	775	0.8	0.6	0.3	0.2 diameter pp	pp;dark yellowish brown sandy clay

Figures

104.Phase AE - row 4 post-hole plans and sections
105.Phase AE - row 4 post-hole plans and sections
106.Phase AE - row 5 post-hole plans and sections
107.Phase AE - row 5 post-hole plans and sections
108.Post-holes 575 and 542 (Row 4; Phase AE) from the south – photograph
109.Post-holes 543 and 544 (Rows 4 and 5; Phase E) from the east – photograph

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Table 56 Phase AE – Six post-holes

Deposit	Cut	N-S	E-W	Depth	Comment	Fill
750	890	0.2	0.2	0.15		yellowish-brown fine silt
752	n/a	n/a	n/a	n/a	too large?	tile and flint packing
751	804	n/a	n/a	n/a		
756	797	0.3	0.4	n/a		yellowish-brown sandy clay
851	n/a	0.4	0.5	0.2		dark brown silty clay
839	838	0.5	0.65	0.12	brick and tile in packing	yellowish-brown sandy clay

Phase AF – Central Pit

Figures

125. Tile on the floor of the central pit (Phase AH) – photograph
126. Gully 297 (Phase AF) running south from the central pit – photograph
127. Close-up of the floor of the central pit (Phase AF) – photograph
130. Trial hole in the red clay beneath the greensand flags of the central pit – photograph
131. More natural red clay beneath the greensand flags of the central pit – photograph

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Phase AH

Figures

140. Post-hole 209 (Phase AH) from the west

Phase AI: 13th to 14th century - medieval occupation or activity?

Description: The contexts which can be assigned to this phase are as follows: 24,32,38,212, 214, 240, 249, 253, 430, 432. These deposits lay mostly over the eastern side of Building 3, with limited areas to the south of the building and an area to the immediate south of the northern internal corridor wall (426). There was also a large area (C432) over the western end of Building 3. Contexts 212 (and 249 below it) were characteristic of the deposits. They had formed as a moderately-sorted fine sandy clay, with only 5% stones; the latter comprised some angular and some rounded flint up to 100mm; there were also occasional fragments of tile up to 160mm. Context 253 was different, being an amorphous poorly-sorted area of silty clay, incorporating 35% stones, with discrete clusters of angular and rounded flint up to 130mm in size. There was also a considerable quantity of gravel (up to 10mm in size), and this context had the appearance of a very rough surface. Context 430 comprised sandy clay, moderately sorted, with 5% stones of angular flint up to 100mm in length. It was noticeable that this deposit, which was a maximum of 100mm in thickness, was thicker as it neared the backfilled robber trench (C437), and also contained some larger flint and tile fragments. It was noted at the time of excavation that this deposit could be related to the fill of the robber trench.

Finds: The bulk finds from these contexts included residual Roman pottery, medieval sherds (Assemblage 25) and ceramic building material, as well as some iron objects and animal bones. There are 325 small finds from these contexts. The most surprising aspect of the distribution of these small finds is that no samian sherds came from the southern or the eastern ranges of Building 3. A number of samian sherds came from the northern and western ranges of Building

3, mostly confined to contexts 430 and 432. However, many of the small finds over the southern and eastern parts of the building do seem to be redeposited and include quantities of flint flakes or tools, whereas those from over the northern and western ranges are more the sort of material associated with Roman demolition deposits, either from the Palace or from Building 3 itself.

How the features were formed: We are dealing here (with the exception of C432) with general spreads of soil that covered much of the foundations and courtyard of Building 3. In such circumstances the soil will have built up by natural processes. Finds will have become incorporated in these amorphous soils as a result of short period(s) of medieval occupation or activity.

The methodological issue here is to try to distinguish between those deposits that definitely postdate and cover the foundations of Building 3, and those deposits that might have been contained within the still-standing, or partly ruinous walls, of Building 3. The marked difference in the distribution of small finds, which seem to separate the eastern range from the northern and western ranges, might suggest that at least the eastern range may have been standing, complete or as a ruin, at this time. On the other hand, the spatial distribution of the contexts in this phase (with the exception of C432) closely mirrors the area where robbing of the foundations took place, and therefore strongly suggests that the medieval activity was centred in this area as a result of the robbing of the eastern foundations.

Overall date: The dating evidence for this phase on the site can be summarised in the following Table, which provides a list of the main datable medieval finds from the relevant contexts.

Table 57 Dating evidence from various contexts of Phase AI

Context	Fine and Coarse Ware
24	13th -14th century - fresh looking sherds
32	13th -14th century - fresh looking sherds
38	13th -14th century - fresh looking sherds
212	Large Saxo-Norman crucible fragment
214	35 sherds of 12th – 13th centuries
240	26 Saxo-Norman sherds
249	11 sherds of Saxo-Norman and 13th century material
253	1 sherd of Atrebatic Overlap ware
430	A few Saxo-Norman to late medieval sherds
432	12th to 14th century material

Interpretation and comment: The different distribution of Roman demolition material and associated small finds (over the northern and western ranges of Building 3) and the absence of Roman small finds and preponderance of medieval sherds (over the eastern and southern ranges), suggests differential use of the site at some time in the 13th or 14th centuries. The southern range had long since been demolished down to the top of its foundations (see phase AH), but the eastern range might have survived as a complete standing building, or in a partly ruinous condition. If it still stood, at least as a ruin, that would explain why very few Roman small finds were spread over it during the general demolition phases of the early 3rd and early 4th centuries.

However, it is more probable that the 'occupation' of the 13th or 14th century relates to the activity connected with the robbing of the foundations of the eastern part of Building 3. By our

own experience of digging out these foundations, (all of 1 metre depth), robbing them would have been both laborious and time-consuming.

Phase AJ: 13th to 14th century - the robbing of the foundations of Building 3

Description: There were a number of different contexts, which comprised deposits filling the robber trenches. Typical deposits were as follows. Context 232 was the fill of the robber trench on the western/internal side of the eastern end of Building 3, where the robbers removed about half of the foundation flints, to a depth of about 0.55m (Figs. 23,144,145). In their place was a fine silty clay, poorly sorted, which contained about 5% stones. These stones comprised angular flints and fragments of greensand up to 50mm in length, with occasional larger flints. There were quantities of tile fragments in the fill, and spreads of mortar flecks. Context 437 was the robber trench fill on the northern internal corridor wall (Figs. 57,58). Here the robbing had been much more extensive and removed the foundation stones in their entirety. The soil matrix was a fine sandy clay loam with up to 35% stones. The stones comprised angular and rounded flints up to 90mm in length, with occasional fragments of greensand. Mortar flecks were scattered in areas in the fill. The deposit was about 1.1m wide and about 0.85m deep; the water table prevented excavation to the bottom of the trench, but it cannot have been more than 0.15m further. It was noticeable that the finds content decreased with depth.

Finds: The bulk finds from the deposits filling the robber trenches included a full range of redeposited material comprising pottery sherds, ceramic building material, iron objects, shell and animal bones. The small finds from the deposits filling the robber trenches comprised approximately 100 finds of different categories including sherds of Roman and medieval dates, flint flakes and iron and copper-alloy objects.

How the features were formed: The deposits filling the robber trenches were presumably derived from the process of robbing the foundations. It appears likely that as the foundations were systematically robbed, upcast of flint rubble would have been thrown to the surface. The larger blocks of flint would have been removed for sorting elsewhere, but the smaller or broken pieces would have been thrown back down the robber trench. At this time, soil derived from other deposits would have been placed in the trench. It is noteworthy that the filling C437 (of the northern internal corridor wall) seemed to contain a much higher percentage of finds, especially tile, suggesting that nearby demolition deposits may have been used to fill the linear hole left by the robber trench. The infilling of the eastern robber trench (C234) contained a high percentage of prehistoric (clearly residual) flint flakes. These must have derived from an adjacent horizon of prehistoric debitage, which perhaps lay to the east.

Overall date: The overall date for the robbing of the foundations cannot be precisely ascertained, but some idea of the dating evidence is given in the Table below.

Table 58 Dating evidence from various contexts of Phase AJ

Context	Samian Sherds	Fine and Coarse Wares

210	1st century	Mainly 3rd century
218	1st century	57 sherds - early and late Roman; 1 Saxo-Norman
232		89 sherds - early and late Roman; 4 Saxo-Norman
234	1st century	181 sherds - early and late Roman; 9 Saxo-Norman
255	Up to Hadrianic	13 sherds of 1st century
257		One lump of fired daub only
259		242 g, including 12th- and 13th century sherds
268	One piece pre-Flavian	Early and late Roman; 2 Saxo-Norman
287		22 sherds including Saxo-Norman
436		1st to 2nd century
437	Latest second century and Antonine	1st to 2nd century

Interpretation and comment: The latest sherds in the fills of the robber trenches are 12th- and 13th century examples, and the Saxo-Norman sherds. As can be seen from the Table, six out of eleven robber trenches produced medieval material. The distribution of the robber trenches producing the medieval material is confined to the eastern range of the building, and suggests that these foundations were not robbed out until the later medieval period, although the absence of medieval pottery from C436 and C437 suggests that the northern walls of Building 3 could have been robbed out in the later Roman period. Three coins were found in the robber trench fills: in the northern cross-wall (C268) an illegible as or dupondius (SF 670) of possible 1st century AD date was recovered; in the eastern wall of Building 3 (C234) an illegible as or dupondius (SF 727) of possible 1st century AD date was recovered; in the uppermost fills of the northern internal corridor wall (C437) a coin (SF 1472) of Constantine I (AD 319-20) was located. It is noteworthy that similar robbing of all the footings in the west and east ranges of the adjacent Palace took place during the medieval period.

Figures

145. Robber trench 232 in the eastern range of Building 3

Phase AK: 15th century - later medieval drain

Description: The same feature was encountered during three different seasons of excavations and therefore a number of different context numbers were given to deposits filling the ditch or drain. A sample description is as follows. Context 204 was the upper fill of the ditch in the north-eastern area of the excavation; it comprised a well-sorted, stone-free clayey silt, with occasional fragments of coal and chalk (less than 1% of the total context). It was about 300mm in depth. Beneath was C203, a thin deposit of sandy clay, containing up to 50% stones, with rounded and angular flints from 20 to 100mm in length. There were occasional fragments of brick and tile in the fill[1]. The lowest fill was C206, comprising a well-sorted, stone-free clayey silt. Context 219 was the excavated cut for the ditch. It had an average width of 1.6m and a depth of 400mm, with straight or concave, gradually sloping sides and an uneven bottom. Levels

[1] In this area of the excavation this ditch cut across the top of the robber trench fill (218). It is possible that some of the tile finds originated from 218, rather than in the medieval ditch.

taken on the base of the ditch indicated a fall, from east to west, of 0.75m over a distance of 25m.

Finds: The bulk finds comprised a considerable quantity of Roman finds of most categories. The small finds from the contexts filling the ditch comprised 221 finds, mostly redeposited and residual finds from the prehistoric and Roman occupation of the site. Most significant for dating the feature were several finds of clay pipes.

How the features were formed: The ditch was cut by hand tools through the contemporary topsoil into the underlying archaeological deposits that were lying directly on top of Building 3. At no point did the ditch clearly cut into any of the masonry footings of the Roman building, although in the north-eastern part of the site it cut across the fill (C218) of the robber trench (Fig. 144). Owing to the relative shallowness of the soils overlying the Roman deposits on the western edge of the excavation, and because of the interruption caused by the previous excavations by Alec Down, the ditch could not be securely located on the western edge of the site. There seems to be little doubt, however, that the ditch was heading for the stream. The ditch silted up through natural processes.

Overall date: The best indicator of a date is provided by the several pieces of clay pipe.

Table 59 Dating evidence from various contexts of Phase AK

Context Number	Layer	Small Find Number	Material	Type
203	1	495	Clay	Pipe
428	1	1251	Clay	Pipe
428	1	1252	Clay	Pipe
428	1	1253	Clay	Pipe
428	1	1254	Clay	Pipe
428	1	1255	Clay	Pipe

If we assume these pipe fragments to be 17th century in date, then it would appear that the ditch was excavated in the late medieval period. Pottery finds from context 405.1 included fresh sherds of a 16th -17th century glazed earthenware pipkin, and from C418 included sherds of 16th -17th century Graffham and glazed earthenware. One of the lower fills (C206) of the ditch produced three fragments of Tudor stoneware jugs and a large sherd from an earthenware bowl of the same date. It would appear, therefore, that this ditch was collecting rubbish, and perhaps going out of use, during the 16th or 17th centuries.

Interpretation and comment: This ditch is likely to have been one of several parallel ditches draining the field from east to west. As such it was probably left open to the elements and did not contain any pipe or conduit. It is noteworthy that Barry Cunliffe found ditches associated with medieval fields over the remains of the Palace. The field strips were about 22 metres wide, separated by open ditches (Cunliffe 1998, 149). Traces of ploughing were observed in these fields above the Palace remains, and it is possible that ploughing took place in the field overlying Building 3. If so, like the fields over the Palace, it is probable that ploughing took place in our field until the 16th or 17th centuries.

Figures

149. The late medieval drain excavated, from the east.

Phase AL: 18th century bone-lines

Summary: A narrow, linear gully was located, entering the excavation from the north and turning to the west to join up ultimately with the stream. The distinguishing feature of the gully was that on the bottom of it were placed, at regular intervals, and transversely to the long axis of the feature, animal bones, predominantly the humeri and femora of horse.

Description: During the course of our excavations of the more recent deposits, and more specifically during the 1997 and 1999 seasons, two lengths of the same small gully were excavated (Figs. 150, 151). The gully measured on average 500mm wide and was about 150mm deep. It was not straight, but entered the excavated area from the north-east (Fig. 150 - point A) and subsequently changed direction (point B) to run almost due west towards the stream (point C). Overall, a length of about 30 metres could be discerned with certainty. The original depth of the gully must have been greater, as it is likely that the top of the sides had been truncated and disturbed both by occasional ploughing and by earthworm activity. In all sections of the gully it was difficult to distinguish the fill from the soil matrix into which the gully had been cut.

The fill was everywhere a soft, fine-grained, sandy loam, well-sorted with occasional gravel fragments up to 40mm in size. Levels taken on the bottom of the gully suggested a steady fall in height from point A to point C (Fig. 150). The southern section of the gully, from point B to point C, was not complete and had been truncated by the earlier trial excavation of Alec Down in 1983 (his trench B). In addition, a crucial stratigraphic relationship was observed in the southern part of the gully, the section immediately to the west of point B. Here it was observed that the gully lay over the drainage ditch dated to the late medieval period (phase AK).

The key characteristic of the gully was a series of large animal bones, predominantly the humeri and femora of horses, which had seemingly been placed very carefully, and at regular intervals, across the short axis of the gully (Fig. 153). The bones numbered some 37 in total, and their identification and other relevant data are given in the Table.

Table 60 Individual bone small finds from Phase AL

Small Find No	Context No	Sheep/Goat	Horse	type of bone	West/North end	East/South end
(from north)		Cattle				
9150	705		horse	humerus	??	??
9149	705		??	??	distal	proximal
9148	705		horse	humerus	distal	proximal
9147	705		horse	humerus	proximal	distal
9146	705		horse	femur	proximal	distal
9145	705		horse	humerus	proximal	distal
9144	705		horse	radius	proximal	distal

9143	705		horse	humerus	proximal	distal
9142	705		horse	femur	distal	proximal
9141	705		horse	femur	proximal	distal
9140	705		horse	femur	proximal	distal
9139	705		horse	humerus	distal	proximal
9138	705		horse	femur	distal	proximal
9137	705		horse	humerus	distal	proximal
828	404		horse	humerus	proximal	distal
829	404		horse	radius	proximal	distal
830	404		horse	humerus	proximal	distal
831	404		horse	femur	proximal	distal
832	404		horse	humerus	proximal	distal
833	404		horse	humerus	proximal	distal
834	404		horse	femur	distal	proximal
1116	404		horse	humerus	distal	proximal
1117	404		horse	humerus	distal	proximal
1118	404		horse	radius	distal	proximal
1119	422		horse	humerus	proximal	distal
1120	422		horse	humerus	proximal	distal
1121	422		horse	humerus	proximal	distal
1122	422		horse	femur	distal	proximal
1123	422		horse	femur	distal	proximal
1124	422		horse	humerus	proximal	distal
1125	422		horse	femur	proximal	distal
998	419		horse	femur	distal	proximal
997	419		horse	humerus	distal	proximal
996	419	cattle		humerus	distal	proximal
995	419		horse	humerus	proximal	distal
994	419		horse	humerus	distal	proximal
				??	could not be determined	

Wherever excavated, these bones appeared to be resting on the bottom of the gully. The bones came from at least 11 different horses. Most of the horses appeared to have been approximately 14-15 hands in size, but one was nearer to the size of a shire horse (17-18 hands). The bones were separated by intervals of approximately 0.65m. There appeared to be only one irregularity in the spacing of the bones. That was at point B where the gully changed direction. Here it was noticeable that the intervals between three bones reduced to between 300 and 400mm (Figs. 151,153,154).

In one section of the gully, that immediately to the west of point B, the bones appeared to slope from north to south (Figs.151,153). However, this may have been more a product of the uneven nature of the bones themselves and of the narrowness of the gully rather than any intentional feature. Two other pieces of evidence were investigated. The regularity of the spacing of the bones, and the difficulties of distinguishing the fill of the gully from the matrix into which it was cut, prompted speculation that the bones may have been placed in regularly spaced pits rather than in a linear gully. This theory was investigated during 1999 by wetting the length of exposed gully and seeing whether different rates of drying might reveal small pits. None were observed. In addition, careful attempts were made to see if there were any soil differences either side of the bones, or indeed underneath the bones once lifted. None were recognized.

Other 'bone-lines' noted by Alec Down: Alec Down had excavated in 1983 (trial trenches A, B, C) close to the western edge of the field and had uncovered a section of Roman masonry walling associated with Building 3. He later moved to the east to dig an extensive area in advance of the construction of the A27. These latter excavations took place in 1985-6 under difficult working conditions, and his trenches were often flooded in the winter. Alec Down died in 1995 and the results of his excavations were published a year later (Cunliffe *et al*.1996). There was no mention of any discoveries of lines of large animal bones in the published report.

However, close scrutiny of Down's archive, housed at Fishbourne Roman Palace, indicated that 'bone-lines' had been encountered. In Alec's trench B, which had truncated our 'bone-line' (*see* above), his notebook (Fishbourne 1983, Trench Book I, 57) clearly indicated that several large animal bones had been noted in the area, almost certainly indicating that the 'bone-line' between points B and C had originally been continuous. Moreover, on his larger excavation to the east, the remains of at least four other 'bone-lines' had been noted (fig.150). Extracts from the archive (Fishbourne 1985, Trench Books: II, 11-12; III, 49; IV, 36-7) are detailed below, starting with the northernmost example.

- D 1024: character - narrow linear feature, fill, several large mammal bones, in matrix of dark-grey-brown loam, + a few flint pebbles. Date - post-med - recent? NB very similar to feature further south, same orientation, or nearly so, same size, same bone fill. Could they be hand dug land drains of recent date draining to the west? They run in the same direction as the mole plough furrows. (p.44 sketch, p.49 description).

- D 1027: character - narrow linear feature, possibly field drain (*see* D 1024). Fill very dark grey brown clay-loam with occasional flint pebbles + large mammal bones set in carefully at right angles to the long axis. Note - fill of this feature is water retentive shows up best on drying after heavy rain. Fill of these features is also much softer than D 5 as a whole. Date - post-med. (p.54 sketch, p.55 description).

- D 504: 7.29m OD. character - narrow slot containing evenly placed horse bones. Fill a) of slot = dark-grey-brown clay loam + four flint pebbles and very few small tile frags + 10 horse bones (some more complete than others). Date - Post-Med, probably later post-med. NB one of these features is visible on pasture surface as green line. NB ritual deposit? NB more likely field drain, bones thrust in at measured distance apart (*see* survey). (p.10 sketch, p.11 description).

- D 517: 7.01m OD. Character - possible field drain? Narrow linear feature, fill very dark-grey-brown clayey loam + a few flint pebbles, with a few very large mammal bones laid out at 90 degrees to its long axis. Date post-med? (p.2 sketch, p.3 description).

There can be little doubt, given the above descriptions, that Alec Down had encountered the same type of feature as we discovered in our excavations. There is also the statement, from one of the descriptions of the 'bone-lines' (D 504), that the bones in question were those of horse and it is a reasonable assumption that these multiple lines contained mostly horse bones. There are a number of questions that arise, however. The group of features (D 1024, 1027, 517) are all aligned ENE to WSW and might have provided a drainage function if the lines continued all the way across the field to the stream on the western edge. However, there is no proof that they actually did continue right across the field, and in both Down's excavations (trench C) and ours in 1998, no trace of an anticipated 'bone-line' (D517) was located. In addition, it is curious that the only 'bone-line' to be extensively excavated (Fig.150) incorporated a distinct turn of direction. This should guard us against assuming that all of the 'bone-lines' were straight. While

the individual bones seemed to have been very carefully placed, the lines were not so: the distance between D1024 and 1027 was approximately 35 metres, while that between 1027 and 517 was around 48 metres.

'Bone-line' D504 was clearly of a different orientation to the three above and might be taken to represent a different chronological phase of drainage. Alec Down provided two readings with reference to height above OD (with respect to D 504 and D 517) and it can be stated, therefore, that the fall of the land is indeed from north-east to south-west, which would suit a drainage interpretation. From his archive notes Alec intimated that the evidence pointed to the 'bone-lines' being post-medieval in date and, although he reflected on the possibility of a ritual explanation, he concluded that drainage was the most likely explanation. In that case the question needs to be asked as to what specific function the bones may have had in facilitating drainage? One functional explanation seems to be that the hand-dug trenches would have been open to the heavens and that the bones acted as successive silt traps, allowing the flow of water across the field to the stream, but restricting the loss of topsoil. This might imply that regular maintenance and cleaning was required to recover the topsoil from the piles amassed by the side of each large horse bone. However, this presupposes that the bones would not have been scavenged by foxes or dogs, which seems unlikely.

Finds: The question of date can be determined with reference to the artefacts from the fill of the gullies of the 'bone-lines', and from a single radiocarbon determination from one of the bones. Pottery retrieved from the gullies resulted both from sherds having been washed out from their sides, as the gullies were abandoned and allowed to fill up (these sherds were therefore residual and earlier than the date of construction of the gullies) and later from sherds being dropped into the gullies as they gradually silted up. It is noteworthy that the fills of the gullies are always described as a silty loam; there is no indication that these gullies were deliberately backfilled.

From our excavations in 1997 and 1999 the finds from the fill of the gullies are as follows:

Table 61 Dating evidence from various contexts of Phase AL

Context	Finds
404	368 g of mainly abraded Roman pottery but including medieval sherds and one fragment of 18th century? Staffordshire china
419	236 g of abraded Roman to 17th century sherds
422	38 g of mainly abraded Roman pottery plus one Saxo-Norman sherd
705	27 sherds (134 g): Roman, medieval and up to 17th century in date

Alec Down's comments on dating have been noted above. He thought the gullies were post-medieval in date.

In addition, one of the horse bones (SF 828 from context 404) was subjected to radiocarbon determination. This was done more to prove that the 'bone-lines' were not Roman, rather than to prove that they were post-medieval in date. The resulting date is as follows:

Lab Number: Beta-125814 (Beta Analytic Inc. of Miami, Florida)
C13/C12 Ratio: -24.2 o/oo
Conventional radiocarbon age: 130+/-60 BP
Calibrated results (2 sigma, 95% probability): cal AD 1655-1950

How the features were formed: In order to ascertain how this feature was formed one very important question was whether the bones had been placed in the gully fleshed or defleshed. To further that enquiry Naomi Sykes examined the bones to ascertain whether defleshing marks could be observed. Most of the bones were in a poor state of preservation: their surface had become eroded and often the proximal and/or distal ends were missing. For these specimens it was impossible to determine the presence of light cut marks. There were a few bones (SF - 1125, 829, 996, 998, 9137, 9147, 9144, 1117, 1119 and 9138) with notably superior preservation: their shaft surface was complete and in most cases the proximal and distal ends were present and well-defined. Because these specimens were in a relatively good condition, any butchery marks present on the bones would have been apparent. Only one specimen, 998, demonstrated obvious butchery. This was a horse femur which displayed a chop mark on the femoral head (the caput femoralis had been cut off). Chop marks of this kind result from disarticulation and, as such, do not inform on the filleting of the joints. One other specimen, 1124 - a humerus, did provide possible light cut marks on the lateral cranial side of the distal end. It must be stressed that these marks were rather faint, but if they were indeed butchery marks, they would correspond with meat removal.

The overall impression is that there is very little evidence for butchery marks on the bones, the majority of marks observed were caused during mechanical removal of the topsoil or during excavation. The butchery marks that there are suggest disarticulation rather than filleting. Horse butchery is generally characterized by the use of heavy cleavers, the type used to make the chop mark seen on specimen 998. Furthermore, it is usually quite basic - knackers were not specialized butchers, they had less need to remove the maximum amount of meat delicately. There remains, therefore, a strong probability that the horse bones were buried with their flesh attached.

We know that in the medieval and post-medieval period, horse meat was used to feed hunting dogs. Markham (1933, 17) recommends feeding them 'horse-flesh newly slaine, and warm at the feeding' because it was 'the strongest and lustiest meat you can give them'. If, however, the meat had been removed for this purpose, we would have expected to see more signs of butchery; (compare these bones with those from sites such as Launceston Castle, (Albarella and Davis, 1996); Dorchester-on Thames, (Grant, 1981), Gorhambury, (Locker, 1990). Evidence from quantities of animal bone on another medieval and post-medieval site is illuminating. Cattle and horse bones were recovered from a ditch and pit at Market Harborough in Leicestershire (Baxter 1996). The horse bones showed few butchery marks on them in contrast to the bones of other domestic animals at the site, suggesting that the horse carcasses were dismembered for easier handling and disposal, rather than for the removal of meat (Baxter 1996, 77).

There is, therefore, a real difficulty in determining how this feature was formed. It may have been dug as one gully, with fleshed bones placed at regular intervals, and some sort of covering material (brushwood?) laid on top of the bones to facilitate drainage, which was then covered with soil to prevent scavenging. Alternatively, but less likely, a number of pits could have been excavated in a line, and fleshed bones placed on the bottom of these pits. The filling of the gully (or pits) occurred through natural silting once the feature ceased to be maintained.

Overall date: In conclusion, the ceramic dating evidence obtained by ourselves and by Alec Down, together with the radiocarbon determination, proves that the phenomenon of the 'bone-lines' can be securely dated to the post-medieval period. If the latest piece of pottery in the gullies indicates the last time these gullies functioned, then an 18th century date could be argued for them.

Interpretation and comment: If we follow one of the propositions outlined above, that these trenches when in use were open to the elements and functioned as drainage channels (with the bones acting as silt-traps to prevent soil run-off), then it is prudent to look for parallels in 18th century England. Parallels recorded in print are few, but the practice of innovatory uses of animal bones in early 18th century England was probably widespread. Armitage (1989) records a number of 'novel' uses of animal bones including cattle metapodials being used as the replacement for dislodged flints in damaged walls, agricultural land drains lined with cattle horns laid end to end, and industrial pits whose sides had been lined with cattle horn cores. Armitage isolates the innovatory use of animal bones to a relatively short period, ceasing sometime in the late 18th century. He suggests (1989,154) that from the late 16th century onwards, cities and towns in the Midlands and south-east experienced unprecedented growth in population and animals were driven 'on the hoof' to the cities to supply their food requirements. Waste animal bone was available in huge quantities and was used in planned, casual or decorative ways. The practice of calcining bones for fertiliser seems to have brought an abrupt end to the availability of waste bone[2].

The evidence, such at it is, points more towards the 'bone-lines' functioning as field drains, and a date in the early 18th century would fit well. Proximity to the rapidly expanding town of Chichester would help to explain the availability of large quantities of horse bones. Interesting areas for discussion remain, however. If they functioned as field drains, it is odd that the drain-digger placed the bones at such regular intervals. Could our regularly-spaced bones have supported timber horizontals (or brushwood?) which were then covered with earth? This would have left voids between the bones, which would have assisted drainage.

A linear arrangement of cattle horn-cores was discovered in the bottom of a drainage ditch in north London, dating to the 17th and early 18th centuries (Armitage *et al.* 1980). At that time there were two main methods whereby the drainage of agricultural land might be improved. The first consisted of digging trenches and filling them with branches, followed by a covering of straw, followed by a loose covering of earth. When the brushwood rotted, hollow tunnels would be formed underground in the soil. The second consisted of cutting a small V-shaped channel in the bottom of the drainage ditch and filling it with blackthorn bushes covered with wheat straw, on top of which the soil was replaced (Youatt 1846, 485-7; Kerridge 1967, 37). Both of these methods produced what in effect were covered underground ditches, often referred to as 'hollow drains'.

Two further questions spring to mind. Why were the bones almost exclusively horse bones? Presumably because cattle meat was eaten and horse meat was shunned, hence the preponderance of bones from the latter animal. There seems to be no regular pattern to the arrangement of distal and proximal ends, so we can discount that factor as significant in the deposition of the bones. If the 'bone-lines' existed in the field as we have drawn them (Fig.150), then a conservative estimate would suggest that there were approximately 150 animals represented. The second question is why the horse bones were predominantly humeri and femora? This clearly had something to do with the size and length of humeri and femora, but presumably other limb bones might have sufficed. The answer may lie in the organisational

[2] Even in the 19th century, however, after the introduction of calcining bones for fertiliser, there was still a considerable industry centred on the recycling of materials from dead horses. Before the bones were ground for fertiliser, grease was extracted for candle-making and leather dressings; skin and hoofs went to make glue; small bones were used for making buttons; manes and tails were used to stuff furniture and make fishing lines and violin bows; hides were used for the manufacture of a variety of leather goods and the meat, in England anyway, went to feed cats and dogs; horseshoes were removed to make a new set (Hartley Edwards 1987, 183).

procedures adopted at knackers' yards. These yards must have been numerous and they functioned as part of a large industry. Perhaps the bones from dismembered horses were piled up according to type in the knackers' yards, enabling purchasers to buy quantities of specific bone types to suit their needs.

There we must leave it. An enduring image abides, however, of a fastidious and innovative farmer[3] in one of the fields of early 18th century Fishbourne. Seeking to assist the drainage in claggy-clay pasture, he carefully places limbs of horses at measured intervals along the bottom of hand-dug trenches. Every so often he paces back to his grazing horse and laden cart to get another armful, sometimes wondering about the unusual quantities of reddish tile and pottery in the ground, but more often not.

Figures

Phase AM: 19th or 20th century mole drains

Summary: During the 19th or 20th centuries further attempts were made to improve the drainage of the field. This involved the deep ploughing of widely spaced narrow, linear channels, orientated approximately north-east to south-west (Fig.155) and draining into the stream.

Description: Context 239 was a well-sorted stone-free clay loam, with no inclusions. It filled a linear slot (context 242) measuring some 180mm in width at the top, by 200mm deep, with a tapered, rounded bottom about 50mm wide. The sides were straight and sloped gradually.

Finds: The bulk finds from these drains included a small quantity of redeposited ceramic building material. The small finds from these drains comprised several miscellaneous objects.

How the features were formed: The sides of these narrow drains were parallel and very straight suggesting that they had been formed by a plough (drawn by horses or oxen if of 19th century date, or by tractor if dating to the latter part of the 20th century). The plough attachment would have had a thin blade for slicing through the soil as it was dragged, and a wedge-shaped end which would have created the narrow channel at the bottom.

Overall date: Contexts 207 and 239 each produced miscellaneous sherds that must be 19th century or later in date. Context 438 produced two sherds, including one of Victorian china. There seems little doubt, therefore, that these drains date to the 19th or 20th centuries.

[3] Fastidious and innovative he may have been, but ultimately also possibly misguided in his endeavours. To date there are no recorded parallels in England, that we have been able to locate, for the kinds of drains described in here. It could be, of course, that more will be found or recognized now that this report has been published. On the other hand it may have been a practise not widely adopted elsewhere.

Interpretation and comment: This clearly represents another attempt to improve drainage in this field. It seems as if the mole drains were about 18 metres apart. The technique was very different from the drains of the 18th century, but the principle was the same - to produce a voided channel under the ground, which would attract water and allow it to drain away quickly to the lowest point of the field.

Figures

Fig.155 Phase AM – general plan

Phase BG – Medieval

Description: Context 903 consisted of a dark-brown silty sand, with occasional pieces of flint and gravel up to 10mm in size. As such C903 is the same as the naturally formed topsoil or ploughsoil encountered in the uppermost deposits of all excavated areas. It was on average about 150mm thick.

Finds: The bulk finds from this deposit included ceramic building material, pottery, iron fragments and animal bones. The small finds comprised over 60 objects including sherds of samian, glass, patterned tile, tesserae, waste lead and nails.

How the features were formed: The deposit of soil 903 was a well-sorted garden topsoil and developed over the Roman midden as a result of natural processes.

Overall date: The coarse wares comprised 277 sherds - some Roman, some Saxo-Norman with 13 sherds dating to the period AD 1250-1350. Most of the small finds were presumably residual.

Interpretation and comment: The bottom of C903 lay at 500mm below the modern ground surface. This is about the average depth of deposit of naturally formed topsoil that covers the Roman features elsewhere on the site and is consistent with a topsoil formed during the long duration of the medieval period.

Phase BH - Post-medieval

Description: Contexts 901, 901.2 and 902 consisted of a dark-brown silty sand, with occasional pieces of flint and gravel up to 10mm in size. As such they were the same as the naturally formed topsoil or ploughsoil encountered in the uppermost deposits of all excavated areas. These deposits covered the whole of Area B and were in total some 350mm thick.

Finds: The bulk finds from this deposit (901.2; 902) comprised ceramic building material, pottery, iron and animal bones. The small finds from this deposit comprised over 200 objects,

the great majority of which were Roman and therefore residual. One fragment of clay pipe was found (SF 9905) and also a half penny of probable 18th century date (SF 9743).

How the features were formed: This deposit was a post-medieval topsoil formed by natural processes.

Overall date: The deposit contained some 438 sherds of Roman, Saxo-Norman, medieval and post-medieval sherds; no sherd was later in date of manufacture than the early 19th century.

Interpretation and comment: This deposit (901.2; 902), the top of which was some 150mm below the extant surface and the bottom some 350mm below the surface, represents the post-medieval topsoil.